



CITY of NOVI CITY COUNCIL

**Agenda Item H
December 17, 2018**

SUBJECT: Approval to award Agreements for Geotechnical Engineering Services for Public Projects to Intertek/Professional Service Industries, Inc., and Testing Engineers and Consultants, Inc., for a period of five years, with an effective date of December 17, 2018.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

CITY MANAGER APPROVAL: *PTK*

BACKGROUND INFORMATION:

Since 2009, the City has contracted for civil engineering consulting services for public infrastructure projects using three pre-qualified engineering consultants. In a similar manner, staff is proposing the continued use of two pre-qualified geotechnical consultants. Prior to 2009, the City had sought proposals for geotechnical engineering each time a project entailed design investigation or construction field and laboratory testing of materials typically used in civil construction. This process was cumbersome and involved lengthy reviews. The use of pre-qualified consultants has streamlined the engineering award process and provides steady, consistent amount of work so each firm can routinely provide qualified staff dedicated to Novi.

The Engineering Division completed the review and recommendation process to utilize two pre-qualified geotechnical consultants for the planning and construction phases of public infrastructure projects. Staff publicly advertised the attached Request for Qualifications and Fee Proposals on September 25, 2018, to solicit two pre-qualified geotechnical engineering consultants. Five firms submitted qualification packages on October 23, 2018. The qualification packages were reviewed and scored using the Qualification Based Selection (QBS) process. The firms with the top two scores were Intertek/Professional Service Industries, Inc. (PSI) and Testing Engineers and Consultants, Inc. (TEC).

The consultants also submitted fee proposals on the City's fee proposal table attached in the Request for Qualifications and Fee Proposals which asked for a straight percentage of the estimated construction cost developed by the civil engineering consultant under each infrastructure category (roads, utilities and pathways) for design investigation and construction material testing. This differs from the older process in which the geotechnical firms provided a list of fees (staff hourly rates, field tests, lab tests, etc.) for each individual task. Having a simple percentage based contract, the City can now better budget projects closer to actual testing performance than estimating probable testing criteria. The presented fee tables are in-line with the historical regression line developed from previous year's projects.

Only the fee proposals from PSI and TEC were opened, and are included at the end of each proposal package. The fee percentages not only align with the City's expectations, but also align with one another. The geotechnical engineering contracts are relatively small, at approximately 1.2% of the estimated construction cost for investigative design and approximately 2.2% of the awarded construction cost for material testing.

The attached Agreements for Geotechnical Engineering Consulting Services for Public Projects was provided to each consultant and executed as a general agreement. Each consultant may execute an Authorization for Additional Services if staff agrees the project scope is considerably different from the expected fee percentage. Historically, variance fees have not significantly affected a project's budget.

RECOMMENDED ACTION: Approval to award Agreements for Geotechnical Engineering Services for Public Projects to Intertek/Professional Service Industries, Inc., and Testing Engineers and Consultants, Inc., for a period of five years, with an effective date of December 17, 2018.

**CITY OF NOVI, MICHIGAN
REQUEST FOR QUALIFICATIONS (RFQ) / REQUEST
FOR FEE PROPOSALS (RFP)**

SEPTEMBER 2018

**GEOTECHNICAL ENGINEERING CONSULTANT
SERVICES FOR PUBLIC PROJECTS**

Section 1: General Information

The City of Novi (population 59,395) is seeking to develop a list of two (2) qualified geotechnical engineering consultants to perform geotechnical investigation and material testing services for water, sanitary sewer, storm sewer, roadway, and pathway related projects as they are completed by the City. Once the list of qualified consultants is selected and approved by City Council, projects are awarded on a rotating basis to the selected firms.

Beginning at the date of Council approval, the qualification for geotechnical investigation and material testing services for public projects will remain in effect for a period up to five (5) years. The qualifications period may be extended beyond five years at the discretion of City Council. During the last two year period, approximately thirty (30) public projects, on an average of \$82,600 in fees were awarded to geotechnical consultants each year.

The Request for Qualifications and Request for Fee Proposals shall be submitted simultaneously in separate envelopes. The qualifications submittal will be reviewed, and the firms with the highest rating following the review process will be selected for a short list. Finally, the selected firm's RFP's will be reviewed, and two (2) firms will be chosen.

Section 2: Qualifications

Firms interested in submitting qualifications shall meet the following minimum requirements:

A. Minimum Qualifications

- a. The firm shall have an established local office with an AASHTO certified laboratory, prior to the date of this RFQ, within thirty-five (35) miles of the Novi Civic Center (45175 Ten Mile Road, Novi MI) that is staffed with personnel who will provide geotechnical engineering services to the City of Novi.
- b. The firm shall demonstrate that an adequate number of professionals are employed in the various fields required to complete the amount of work and the type of work contemplated in this RFQ.
- c. The firm shall employ a minimum of two (2) licensed professional engineers registered in the State of Michigan, and located in the local office, as outlined above.

B. Format Requirements for Qualifications Submittal

- a. Background of firm - History, areas of expertise, locations, size and resource capabilities (especially of the local office) to perform the required services, and meet the minimum qualification requirements.
- b. Statement of understanding of the general scope of services.
- c. Staffing Section – Provide résumés of individuals who provide oversight during the investigation and testing. (During the contract period, if the firm chooses to assign different personnel, then the firm must submit their names and qualifications, including information listed above, to the City for advanced approval). The firm's field technicians shall maintain their Level 1 Concrete Field Testing Certification (MCA) and their MDOT Density Technology Certification.
- d. Qualifications Section – This section shall describe the qualifications of the firm in regard to experience with each type of project (roads, pathways, city utilities) within the past two (2) years. Information presented in this section shall include the following for each type of project:
 - I. A general summary of the firm's demonstrated capabilities and experience.
 - II. Detailed descriptions of projects similar in nature to the services described in the RFQ.

- III. Names of key staff who participated in referenced projects and their specific responsibilities with respect to the services described in the RFQ.

- IV. A minimum of three (3) references from municipalities, or municipal engineering firms that received similar services from the firm. The City of Novi reserves the right to contact any of the organizations or individuals listed. Information provided shall include: 1) client name, 2) project description, 3) project start and end dates, and 4) client contact name, telephone number and e-mail address.

Section 3: Qualification Submittal Evaluation

The City's geotechnical consultant evaluation and selection process is based on the Qualifications Based Selection (QBS) process for professional services. The City will use the following criteria in its evaluation and selection process:

- A. Background of Firm. (15%)
- B. Understanding of the Scope of Services, and commitment to exceeding minimum requirements. (35%)
- C. Recent experience in conducting similar scopes of work for other public agencies (excluding City of Novi). (25%)
- D. Staff's educational background, work experience and relevant consulting experience. (25%)

The City may contact and evaluate the firm's references; contact the firm to clarify any response; contact any of the firm's current clients; solicit any information from any available source concerning any aspect of a submittal; and seek and review any other information deemed pertinent to the evaluation process.

Section 4: Cost Proposal

A. Award of Contracts

The selected consultants will enter a general agreement with the City (see agreement draft in Exhibit A) for a period of five (5) years. Each project will be awarded to a consultant administratively under the terms of the general agreement. Projects will be awarded on a rotating basis or as determined to be in the best interests of the City. The order of award to consultants will initially be chosen at random and projects will generally be awarded in order with the intent to award comparable fee amounts to each consultant during the 5-year term of the general agreement. It is possible, based on varying contract amounts that the award order could change from the initial order.

B. Fee Structure

The fees for standard projects will follow the tabulated fee structure provided in Attachment A. Other Considerations are as follows:

- a. A completed Attachment A shall be submitted as the fee proposal for consideration of future contracts. Following receipt of all fee proposals, the City will work with the qualified consultants to develop a uniform fee structure.
- b. The fee percentages shall include all expenses required to complete the scope of services described herein, including but not limited to costs related to mileage, vehicles, reproduction, mobilization, traffic control, computer use, etc., unless otherwise indicated on proposal form.
- c. If the City and the selected consultant are unable to agree upon a standard fee percentage schedule, the City at its own discretion may choose to select the next highest scoring firm as a pre-qualified consultant for submittal of a proposal.
- d. When submitting the proposal, include a fee sheet of all the testing, boring, equipment, and staff prices for any miscellaneous projects that do not fit the normal project categories stated in the Scope of Work, below.

Section 5: Scope of Work

General Investigation and Material Testing Scope of Services for Public Projects:

The following project categories with geotechnical investigations or material testing are included as general projects under this contract; therefore, a standard fee and scope would be developed:

- Road Rehabilitation/Reconstruction
- Traffic Signal Replacement
- Sidewalk/Pathway Construction
- Water Main Construction
- Sanitary Sewer Rehabilitation

The scope of services for design and construction phase projects will generally include the following scope of services:

- A. At the beginning of each project, discuss the project needs with the City and/or the City's engineering consultant to determine the location and number of soil borings or pavement cores needed for the project. Once awarded by the City, perform the field work agreed upon in the scope of services for each project and provide reports as necessary to the City and the City's engineering consultant to assist in the design phase of the project.
- B. Prior to the construction phase of each project, discuss and/or meet with the City and/or the City's engineering consultant to determine the scope of services for material testing in the construction phase of the project.
- C. Once awarded by the City, perform the field work agreed upon in the scope of services for each project and provide routine reports as necessary to the City and the City's engineering consultant within one week of each site visit. All reports or test results should be submitted electronically to the individuals identified by the City.
- D. Any failing tests in the field shall be documented and immediately brought to the attention of the City and the City's engineering consultant.
- E. Attendance at the pre-construction meeting shall be required.
- F. Coordinate with Miss Dig before any investigation work is started.
- G. Consultants must be available with twenty-four (24) hour notice for material testing.

Section 6: Instructions to Proposers

Questions

Questions regarding this Request for Qualifications may be directed to: Construction Engineer, Aaron Staup at astaup@cityofnovi.org or (248) 347-3270, or Engineering Senior Manager, George Melistas at gmelistas@cityofnovi.org or (248) 735-5632.

Important Dates

RFQ Issue Date: **September 25, 2018**

Last Date for Questions: **October 23, 2018**

Response Due Date: **November 7, 2018**

Proposal Submittals

To be considered, sealed RFQ (five paper copies (bound) and one CD, DVD or flash drive containing the complete proposal in pdf format) **and** one sealed RFP (one paper copy, separately) must arrive at the City of Novi, Finance Department, 45175 Ten Mile Road, Novi, Michigan 48375 on or before **3:00 P.M., Wednesday, November 7, 2018**, and clearly labeled "Geotechnical Engineering Consultant Services for Public Projects 2018-2023". There will be no exceptions to this requirement and the City of Novi shall not be held responsible for late, lost, or misdirected proposals. No other distribution of the proposals will be made by the Consultant. Proposals must be signed by an official, authorized to bind the Consultant to its provisions.

FAILURE TO SUBMIT PERCENTAGE PRICING ON THE PROPOSAL FORM PROVIDED BY THE CITY OF NOVI MAY CAUSE THE BID TO BE CONSIDERED NON-RESPONSIVE AND INELIGIBLE FOR AWARD.

Proposals must be submitted in a sealed envelope. Outside of mailing envelope must be labeled with name of consultant and name of RFQ. Failure to do so may result in a premature opening or failure to open such proposal.

To be considered, sealed proposals must arrive at Finance Department, on or before the specified time and date. There will be no exceptions to this requirement. Proposal is considered received when in the possession of the Finance Department. Consultants mailing proposals should allow ample time to ensure the timely delivery of their proposal. Proposals received after the closing date and time will not be accepted or considered. Faxed, emailed, or telephone bids are not acceptable. The City of Novi shall not be held responsible for lost or misdirected proposals. The City reserves the right to postpone an RFP opening for its own convenience.

A proposal may be withdrawn by giving written notice to the Purchasing Manager before the stated due date/closing time. After the stated closing time, the bid may not be withdrawn or canceled for a period of One Hundred and Twenty (120) days from closing time.

- Proposers are expected to examine all information and instructions. Failure to do so will be at the proposer's risk.
- Failure to include in the proposal all information requested may be cause for rejection of the proposal.
- Any samples, CDs, DVDs or any other items submitted with your bid will not be returned to the consultant.

No proposal will be accepted from, or contract awarded to any person, firm, or corporation that is in arrears or is in default to the City Novi upon any debt or contract, or that is in default as surety or otherwise, or failed to perform faithfully any previous contract with the City.

USE OF THE CITY LOGO IN YOUR PROPOSAL IS PROHIBITED.

Changes to the RFQ/Addenda

Should any prospective Proposer be in doubt as to the true meaning of any portion of the Request for Qualifications (RFQ) or Request for Fee Proposal (RFP), or should the Proposer find any patent ambiguity, inconsistency, or omission therein, the Proposer shall make a written request (via email) for official interpretation or correction. Such request shall be submitted to the specified person by the date listed above. The individual making the request shall be held responsible for its prompt delivery.

Such interpretation or correction, as well as any additional RFQ provisions that the City may decide to include, will be made as an addendum, which will be posted on the MITN website at www.mitn.info. Any addendum issued by the City shall become part of the RFQ and shall be taken into account by each proposer in preparing their proposal. Only written addenda are binding. It is the Proposer's responsibility to be sure they have obtained all addenda. Receipt of all addenda must be acknowledged on proposal form.

Responsive Proposals

All pages and the information requested herein shall be furnished completely in compliance with instructions. The manner and format of submission is essential to permit prompt evaluation of all proposals on a fair and uniform basis. The City reserves the right to declare as non-responsive, and reject an incomplete proposal if material information requested is not furnished, or where indirect or incomplete answers or information is not provided.

Contract Award

The contract that will be entered into will be that which is most advantageous to the City of Novi, prices and other factors considered. The City reserves the right to accept any or all alternative proposals and to award the contract to other than the lowest proposer, waive any irregularities or informalities or both, to reject any or all proposals, and in general, to make the award of the contract in any manner deemed by the City, in its sole discretion, to be in the best interests of the City of Novi.

After contract award, notification will be posted on the MITN website at www.mitn.info

FIRM NAME: _____

**ATTACHMENT 'A'
GEOTECHNICAL ENGINEERING FEES**

COST OF CONSTRUCTION (ESTIMATED) From To		ROAD RECONSTRUCTION		ROAD RECLAMATION		ROAD REHABILITATION		NON-MOTORIZED (SIDEWALKS, PATHWAYS & TRAILS)	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000								
\$ 200,001	\$ 300,000								
\$ 300,001	\$ 400,000								
\$ 400,001	\$ 500,000								
\$ 500,001	\$ 750,000								
\$ 750,001	\$ 1,000,000								
\$ 1,000,001	\$ 2,000,000								
\$ 2,000,001	and greater								

COST OF CONSTRUCTION (ESTIMATED) From To		WATER MAIN CONSTRUCTION		SANITARY/STORM SEWER CONSTRUCTION		UNDERGROUND UTILITY REHABILITATION		TRAFFIC SIGNALS	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000								
\$ 200,001	\$ 300,000								
\$ 300,001	\$ 400,000								
\$ 400,001	\$ 500,000								
\$ 500,001	\$ 750,000								
\$ 750,001	\$ 1,000,000								
\$ 1,000,001	\$ 2,000,000								
\$ 2,000,001	and greater								

- Notes:**
- Design fees are determined by multiplying the construction cost estimate by the % fee shown in the above tables.
 - Construction fees are determined by multiplying the contractor's bid by the % fee shown in the above tables.
 - See the Request for Proposals and Request for Qualifications regarding the specific scope of services included under each fee and for any exclusions (i.e. work performed by City staff as part of the project).
 - All percentages or fees shall be considered 'all-inclusive'.
 - Not all projects will require initial geotechnical design and/or construction material testing.

This proposal submitted by:

Company (Legal Registration) _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Representative's Name _____

Representative's Title _____

Authorized Signature _____

E-mail _____

Date _____

EXHIBIT A

STATE OF MICHIGAN

COUNTY OF OAKLAND

CITY OF NOVI

**AGREEMENT FOR GEOTECHNICAL ENGINEERING
CONSULTANT SERVICES FOR PUBLIC PROJECTS**

BETWEEN

CITY OF NOVI

AND

This Agreement is effective this ___ day of _____, 2014, and is between the **City of Novi**, 45175 Ten Mile Road, Novi, Michigan 48375 (hereafter "**City**") and _____, _____, Michigan _____ (hereafter "**Consultant**").

RECITALS:

The City desires to engage the professional services of the Consultant to perform geotechnical engineering services for public projects on behalf of the City.

The Consultant desires to provide such services, as set forth below and in the attached and incorporated Exhibits, under the terms and conditions hereof.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

1. General Scope of Services and Term of Agreement:

- a. For and in consideration of payment by the City as provided in this Agreement, Consultant shall perform the services described herein, including the services described in Exhibit A—*Geotechnical Engineering Consultant Services For Public Projects*, if and when such services are assigned by the City to Consultant, in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, and in compliance with all terms and conditions of this Agreement.

- b. For geotechnical engineering services for individual projects, if and when assigned to Consultant, including roadway construction and rehabilitation work, sidewalk and pathway construction, water main construction, sanitary sewer/storm sewer construction, underground utility rehabilitation, and traffic signal construction, consultant shall submit an individual work plan and schedule for each project assigned to Consultant by the City based upon the scope of the particular project as described in accordance with Exhibit B— *Geotechnical Engineering Fee Schedule* for that particular type of project. Services shall be assigned to Consultant by approval by the City of a *Work Plan and Schedule*, which shall be prepared for each individual project assigned to Consultant setting forth the specific scope and cost of the particular project. Consultant shall comply with the work description, insurance requirements, and other terms applicable to each individual project as set forth in the *Work Plan and Schedule*.
- c. The term of this Agreement shall be five (5) years from the date set forth above, and will be open for review and negotiation by mutual agreement of Consultant and the City of Novi for any additional terms. However, either party may terminate this Agreement for any reason upon ninety (90) days' written notice to the other party. This Agreement may be terminated by either party upon 7 days' prior written notice to the other party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party. Payments shall be made for work completed up to the termination date.
- d. This Agreement is based on the ordinances, policies, procedures, or requirements in effect on the date of the Agreement. Any additional office or field services required as a direct and apparent result of the change of such ordinances, policies, procedures, or requirements shall be negotiated to the mutual consent of the City and Consultant.
- e. City agrees that the plans, drawings, or other contracted services are primarily for the use of City. All documents prepared by the Consultant, including tracings, drawings, estimates, specifications, field notes, investigations, studies, reports, computer files, field data, notes, etc., in connection with the performance of its duties under this agreement shall become the property of the City upon completion of the services and payment in full of all monies due to the Consultant with respect to the preparation of such document. Reuse of any such materials by City on any extension of any project or any other project without the written authorization of Consultant shall be at City's sole risk. Consultant shall have the right to retain copies of all such materials.
- f. The parties to this Contract intend that the relationship between them created by this Contract is that of service provider and service purchaser. It is expressly agreed, understood and intended that no employee-employer relationship shall exist or be established and that Consultant is an independent contractor who has

been retained to render services to the City to achieve specific results in exchange for specified recompense. As an independent contractor, Consultant expressly agrees that: (a) In the performance of this Contract, the relationship of Consultant to the City shall be that of an independent contractor and not that of an employee or agent of the City, and neither Consultant, nor any agent, employee or permitted subcontractor of Consultant, shall be or may be deemed to be the employee or agent of, or a servant to, the City; (b) Consultant will be solely responsible for payment of salaries, wages, and other compensation for its employees and agents; (c) Neither the Consultant nor any officer, agent, employee or subcontractor of the Consultant shall be eligible for coverage under or eligible to receive the benefits of the City's Workers' compensation, unemployment or health insurance, pension plans or other benefit plans; (d) Consultant is and shall perform under this Contract as an independent contractor, and no liability or responsibility with respect to benefits of any kind, including without limitation, medical/health benefits, Worker's compensation, pension rights, or other rights or liabilities arising out of or related to a contract for hire or employer/employee relationship shall arise or accrue to either party as a result of the performance of this Contract; and (e) Consultant, as an independent contractor, is not authorized to enter into or sign any agreements on behalf of the City.

2. Payment for Services:

- a. Consultant shall invoice City monthly on account of Consultant's services. City shall pay Consultant within thirty (30) calendar days of the time of receipt of invoice from Consultant on account. Subject to sub-paragraph 2(b) below, the City shall pay the undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, Consultant may suspend further performance until payments are current.
- b. City agrees that the periodic billing from Consultant to City are presumed to be correct, conclusive with regard to the services provided, and binding on City unless City, within thirty (30) calendar days from the date of receipt of such billing, notifies Consultant in writing of alleged disagreements with regard to the billing. Errors or discrepancies in a billing recognized after 30 calendar days but not more than 180 calendar days after receipt of invoice from Consultant shall be resolved to the mutual satisfaction of both parties. After 180 calendar days after receipt of invoice from Consultant, the professional services provided by Consultant shall be viewed as acceptable and closed.
- c. All fees and/or costs associated with or due to any governmental or review agencies arising from the services are the sole responsibility of the City.
- d. For individual projects assigned to Consultant in accordance with Section 1(b) above, a more specific procedure for submission and approval of billing statements may be set forth in the *Work Plan and Schedule* for each project. The

City shall confirm the correctness of any progress estimates made for billing purposes, and may use City staff for such purposes. Monthly statements for services shall be accompanied by such properly completed reporting forms and such other evidence of progress as may be required by the City.

- e. In the event of termination for a substantial failure by the Consultant to fulfill its obligations under this agreement through no fault of the City, Consultant shall be paid as compensation in full for services performed to that date an amount calculated in accordance with the *Work Plan and Schedule* for that particular project. Such amount shall be paid by the City upon Consultant's delivering or otherwise making available to the City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been prepared and/or accumulated by Consultant in performing the services up to the date of termination.

3. Indemnification and Liability:

- a. The Consultant agrees to hold harmless and indemnify the City, its officers, agents, employees from and against all claims, demands, suits liability, losses, damages or costs (including reasonable attorney fees and costs) to the extent arising out, of or resulting from the Consultant's tortious or negligent acts, errors, or omissions in performing this Agreement and all Supplemental Agreements.
- b. The City and Consultant acknowledge that the Consultant's Scope of Services does not include any services related to the presence of any hazardous or toxic materials. In the event the Consultant or any other party encounters any hazardous or toxic materials, or should it become known to the Consultant that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of the Consultant's services, the Consultant may, at its option and without liability for consequential damages, suspend performance of its services under this Agreement until such time as the City retains appropriate Consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations.
- c. Consultant shall not be liable for damages resulting from the actions or inactions of any governmental agencies, including, but not limited to, plan processing; provided, however, that this provision shall not relieve Consultant of its obligations under this Agreement, including all Exhibits hereto, with respect to its securing, or assisting the City in securing, various governmental permits and appraisals in a manner consistent with the standard of care set forth in Paragraph 1.a. above.
- d. Except as specifically set forth in the applicable *Work Plan and Schedule*, the City acknowledges that Consultant is not responsible for the performance or work by

third parties, including, but not limited to, construction contractors or their subcontractors.

4. Insurance:

- a. During the term of this Agreement, Consultant shall obtain and maintain in full force, at its own expense, the following insurance coverage in not less than the following amounts:
 - i. Worker's Compensation insurance relative to all Personnel engaged in performing services pursuant to this Agreement, with coverage not less than that required by applicable law,
 - ii. Comprehensive General Liability Public Liability, for occurrences while engaged in performing services pursuant to this Agreement, with coverage not less than the amount of \$1,000,000 per occurrence;
 - iii. Professional Liability (Including Errors and Omissions) Insurance in the amount of \$1,000,000 per claim
 - iv. Automotive Insurance covering all owned, hired, and non-owned vehicles with insurance to comply with the Michigan No-Fault Insurance Law, including Regional Liability Insurance with minimum bodily injury limits of \$1,000,000 each occurrence and minimum property damage of \$1,000,000 per occurrence.
- b. Consultant shall be responsible for all deductibles contained in any insurance required hereunder.
- c. If during the term of this Agreement changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate existing insurance limits, the Consultant will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such reasonable additional insurance coverage cost shall be paid for by the City of Novi, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City. The cost of insurance for individual projects shall be factored into the established fee curves in Exhibit B—*Geotechnical Engineering Fee Schedule* for each particular type of project
- e. All policies shall name the Consultant as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the City.

- f. With the exception of Professional Liability, all insurance policies shall name the City of Novi, its officers, agents, and employees as additional insured. Certificates of Insurance and required endorsements evidencing such coverage shall be submitted to Sue Morianti, Purchasing Manager, City of Novi, 45175 Ten Mile Road, Novi, MI 48375-3024 prior to the commencement of performance under this Agreement and at least fifteen (15) days prior to the expiration dates of expiring policies.
- g. If any service is sublet in connection with this Agreement, the Consultant shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Consultant.
- h. The provisions requiring the Consultant to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Consultant under this Agreement.
- i. Coverage under the general and auto liability policies shall be considered to be the primary coverage rather than any policies and insurance or self-insurance retention owned or maintained by the City of Novi. This coverage shall be primary to the Additional Insureds, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether other available coverage is primary, contributing or excess.
- j. The Policies shall be endorsed to provide the City with thirty (30) days prior written notice of cancellation or nonrenewal.

5. Entire Agreement

- a. Except for the terms of each *Work Plan and Schedule*, which shall be deemed additional terms to this Agreement, this Agreement contains the entire agreement between the City and Consultant relating to services to be provided by Consultant to the City. Any prior agreements, promises, negotiations, and representations not expressly set forth in this Agreement are of no force or effect. Subsequent modifications to this Agreement shall be in writing and signed by both City and Consultant.
- b. With respect to any direct conflict between the terms of this Agreement and any *Work Plan and Schedule* as defined in Section 1(b) above, the terms of the *Work Plan and Schedule* shall control with respect to that individual project.
- c. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.

6. Assignment:

Neither City nor Consultant shall assign this Agreement without the prior written consent of the other.

7. Severability:

Waiver of any term, condition, or covenant, or breach of any term, condition, or covenant, shall not constitute the waiver of any other term, condition, or covenant, or the breach of any other term, condition, or covenant. If any term, condition, or covenant of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions of this Agreement shall be valid and binding on City and Consultant, unless the court's action or holding has the effect of frustrating the purpose of this Agreement.

8. Delays:

It is expected that the Consultant will perform the work in a timely fashion in accordance with the schedule that is agreed upon at the commencement of each project. The Consultant shall provide requested items within ten (10) working days of the request. Deliverables (engineering reports, test results, boring logs, approval letters, rejection letters, inspection reports, etc.) shall be submitted to appropriate City staff no later than ten (10) working days after the work is performed.

Consultant is not responsible for delay caused by activities or factors beyond the Consultant's reasonable control, including but not limited to, delays by reason of strikes, lockouts, except with respect to Consultant's own employees, service slowdowns or stoppages, accidents, acts of God, failure of Client to furnish timely information or approve or disapprove of Consultant's services or product promptly, faulty performance by the City or the City's other contractors or government agencies. When such delays beyond the Consultant's reasonable control occur, City agrees Consultant is not responsible for damages nor shall Consultant be deemed to be in default of this Agreement.

No charges or claims for damages shall be made by the Consultant for delays or hindrances from any cause whatsoever during the progress of any portions of the services specified in this Agreement, except as hereinafter provided.

In case of a substantial delay on the part of the City in providing to the Consultant either the necessary information or approval to proceed with the service resulting through no fault of the Consultant, in delays of such extent as to require the Consultant to perform its services under changed conditions not contemplated by the parties, the City will be responsible for supplemental compensation limited to increased costs incurred as a direct result of such delays. Any claim for supplemental compensation must be in writing and accompanied by substantiating data.

When delays are caused by circumstances or conditions beyond the control of the Consultant as determined by the City, the Consultant shall be granted an extension of time for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the permitting of the Consultant to proceed to complete the services, or any part of them, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights herein set forth.

9. Disclosure:

Consultant affirms that it has not made or agreed to make any valuable gift whether in the form of service, loan, thing, or promise to any person or any of the person's immediate family, having the duty to recommend, the right to vote upon, or any other direct influence on the selection of consultants to provide professional design services to the City within the two years preceding the execution of this Agreement. A campaign contribution, as defined by Michigan law shall not be considered as a valuable gift for the purposes of this Agreement.

10. Nondiscrimination:

The Consultant shall not discriminate against any employee, or applicant for employment because of race, color, sex, age or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78 Stat. 252 and 1976 PA 4563) and will require a similar covenant on the part of the consultant or subcontractor employed in the performance of this Agreement.

11. Approval; No Release:

Approval of the City shall not constitute nor be deemed release of the responsibility and liability of Consultant, its employees, associates, agents and consultants for the accuracy and competency of their designs, drawings, and specifications, or other documents and services; nor shall that approval be deemed to be an assumption of that responsibility by the City for any defect in the designs, drawings and specifications or other documents prepared by Consultant, its employees, subcontractor, agents and consultants.

12. Compliance With Laws:

This Contract and all of the Consultant's Professional Services and practices shall be subject to all applicable state, federal and local laws, rules or regulations, including without limitation, those which apply because the City is a public governmental agency or body. Consultant represents that it is in compliance with all such laws and eligible and qualified to enter into this Agreement.

13. Notices:

Written notices under this Agreement shall be given to the parties at their addresses on page one by personal or registered mail delivery to the attention of the following persons:

City of Novi: **Jeff Herczeg, Director of Public Works and Cortney Hanson, Clerk, with a copy to Thomas R. Schultz, City Attorney**

Consultant: _____

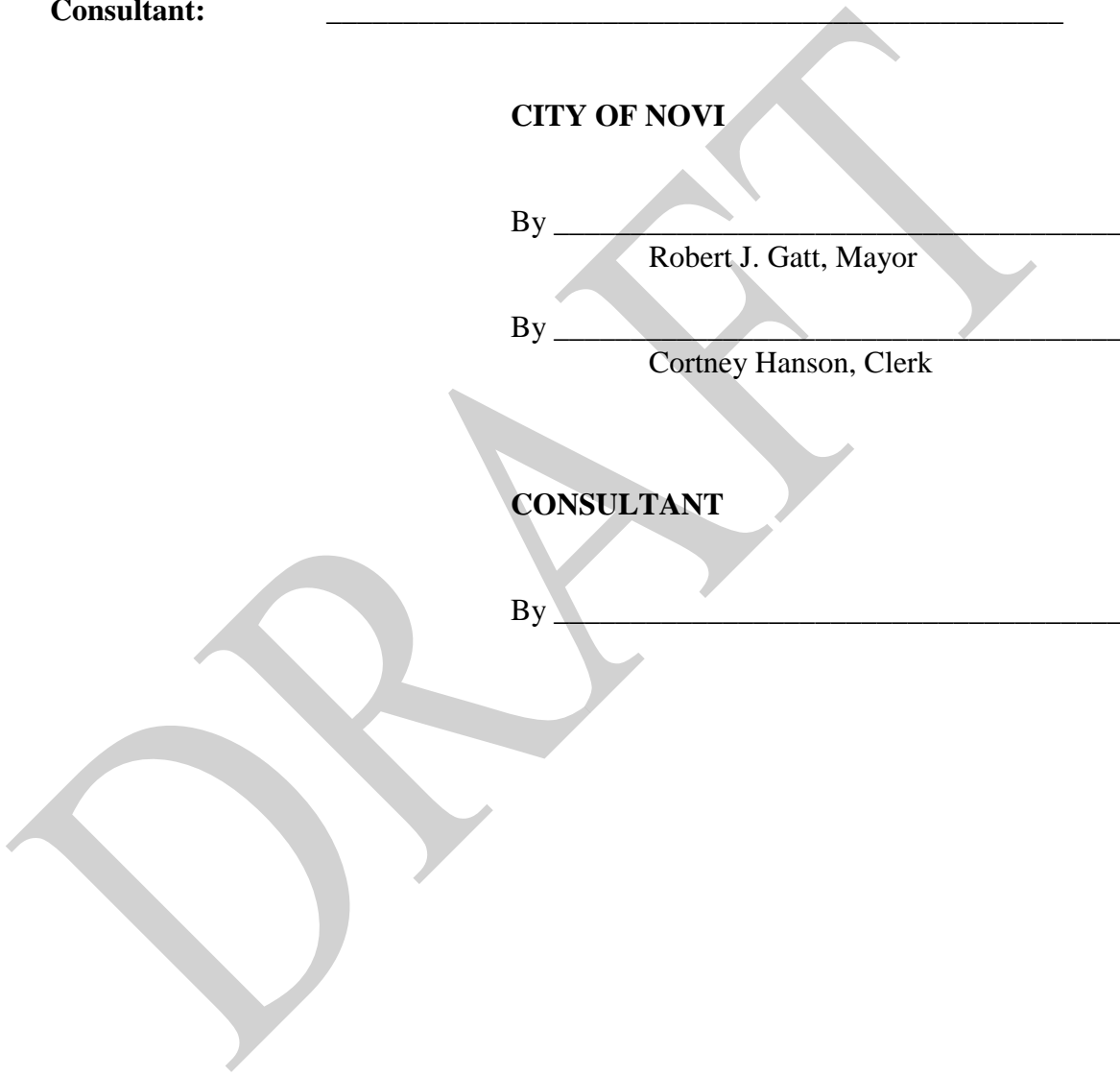
CITY OF NOVI

By _____
Robert J. Gatt, Mayor

By _____
Cortney Hanson, Clerk

CONSULTANT

By _____



RFQ



REQUEST FOR PROPOSAL TO PROVIDE

CITY OF NOVI, MICHIGAN

GEOTECHNICAL ENGINEERING CONSULTANT SERVICES FOR PUBLIC PROJECTS

2018-2023



Submitted to

THE CITY OF NOVI, MICHIGAN

November 2018



CITY OF NOVI, MICHIGAN

November 5, 2018

City of Novi
Finance Department
45175 Ten Mile Road
Novi, Michigan 48375
ATTN: Mr. Carl Johnson, Finance Director
PSI Proposal No. 0381-260502

Dear Mr. Johnson,

Professional Service Industries, Inc., (PSI) an Intertek Company, welcomes this opportunity to propose on your Geotechnical Engineering Consultant Services for Public Projects 2018 – 2023.

PSI is one of the largest consulting engineering and independent testing firms in the United States with a business history dating back to 1881. We are also in your neighborhood, with an office and laboratory accredited through the AASHTO AMRL and CCRL as well as certified by the Army Corps of Engineers, just 4.3 miles from the Novi Civic Center and 6 other office/labs in the State of Michigan.

PSI brings extensive experience in providing soils, foundations, geotechnical and materials testing services, environmental, as well as special structural integrity assessments, threshold building inspections, and other special inspections as necessary for the new facilities, refurbishments, design and construction for vertical and horizontal construction and water /wastewater related infrastructure as may be required by the City. We successfully provide these services to City Governments, State Agencies and private firms throughout Michigan.

We look forward to working with the City of Novi on your important programs.

Sincerely,

Professional Service Industries, Inc.,

Mahmoud El-Gamal, Ph D., P.E., D.GE
Vice President/ Chief Engineer



Table of Contents

**Intertek PSI Team’s response to
City of Novi, Michigan
Request for Qualifications (RFQ) / Request
For Fee Proposal (RFP)
September 2018
Geotechnical Engineering Consultant
Services for Public Projects**

Qualification

Section A	Background of the Firm
Section B	Understanding of the Scope of Services
Section C	Staffing Section / Resumes
Section D	Qualification Section
	<ol style="list-style-type: none">1. General Summary of Firms Capabilities2. Descriptions of projects Similar in Nature to Services Described in the RFP3. Names of Key Staff on Referenced Projects and Role in Novi Projects4. References

Attachments I – Resumes

Attachment II – Project Examples

Fee Proposal

Submitted in a Separate Envelope

Section A - Background of the Firm

Intertek

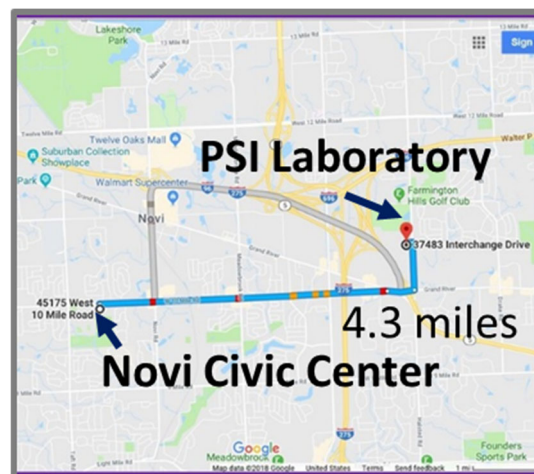
For more than 135 years, companies around the world have depended on Intertek to help ensure the quality and safety of their products, processes and systems. Intertek is a Total Quality Assurance provider to industries worldwide. Through our global network of state-of-the-art facilities and industry-leading technical expertise we provide innovative and bespoke Assurance, Testing, Inspection and Certification services to customers. Intertek is an industry leader with more than 42,000 employees in 1,000 locations in over 100 countries. Intertek is a trusted brand throughout industry. Intertek purchased Professional Service Industries (PSI) in 2015. PSI is now a key part of Intertek’s Building and Construction business, the most comprehensive provider of consulting, testing, inspection, and certification to the building products and construction project industry, worldwide.

PSI

Professional Service Industries, Inc. (PSI), an Intertek company, nationally recognized consulting engineering and testing firm providing integrated services in several disciplines, including environmental consulting, building envelope consulting and testing, geotechnical engineering, construction materials testing and engineering, asbestos management and facilities engineering and consulting. We are recognized as one of the largest engineering design consulting companies in the US. We have been providing engineering consulting services to Fortune 500 clients and governmental agencies for over 100 years. Today, we employ approximately 2,300 skilled personnel in 100 offices. However, our proudest accomplishment is the large number of clients that we have serviced for many years that keep coming back because of our responsiveness, commitment to listening to our clients, and consistent quality of service.

Distinguished as both a local and a national leader in engineering and environmental services, we operate out of 7 office/laboratories in Michigan. We have been serving Michigan clients for over 30 years.

Local Laboratory Facilities: PSI’s Farmington Hills Office at 37483 Interchange Drive, maintains and operates one of the largest, fully equipped laboratories in the Greater Detroit Metro area and is located just 4.3 miles via surface roads, from the Novi Civic Center. Our Farmington Hills Laboratory is accredited through the AASHTO AMRL and CCRL as well as certified by the Army Corps of Engineers (USACE). PSI operates six (6) additional offices/labs in Michigan, including locations in Saginaw, Detroit, Troy, Lansing, Kalamazoo, and Grand Rapids. These facilities could be utilized if overall project scope and schedule require additional resources.



Our laboratories are equipped with state-of-the-art equipment to expedite sample preparation and testing procedures. PSI's concrete compression machine feeds data directly into our database system to reduce operator error and provide accurate data for immediate review. PSI's laboratories are staffed with full time NICET certified laboratory technicians to respond to heavy workloads and the need for quick results. Each individual test is performed in strict accordance with the latest AASHTO, ASTM and MDOT standards with careful consideration to any project special provisions and specifications.

Our Mission

To exceed our customers' expectations with innovative and bespoke Assurance, Testing, Inspection and Certification services for their operations and supply chain.

Globally. 24/7.

The closeness of our laboratory to the City of Novi enables us to easily drop off samples after hours and make quick runs to our home base. PSI understands that the contractors work off-hours, weekends and holidays; therefore, we maintain an exclusive on-call Laboratory Assistant who will be available after hours. The depth and experience levels of our personnel make it possible for us to meet the City's needs. This assures that we will have the required personnel available to staff your projects.

Geotechnical related equipment: Intertek-PSI has vast equipment resources for use on this contract. PSI owns and operates three drilling rigs, one truck mounted and one ATV vehicle within the Detroit Metro region. PSI also owns and operates twelve truck and ATV-mounted drilling rigs throughout the Midwest. In addition to our large fleet of drilling rigs, PSI also maintains, in-house and with our subs, many pieces of specialized equipment, including PDA (PAK/PAX) units, CAPWAP/WEAP software, Cross-hole sonic logging (CSL), GPS units, and Vibration and Air Monitoring Equipment.

Owning and operating our own rigs and various specialized equipment ensures a timely response (within 24 hours) and completion of even the most complicated projects in a timely fashion as well as a cost savings to the City of Novi.

Staffing: PSI will staff and service the City of Novi contract from its Farmington Hills facility. The Farmington Hills facility, currently employs five (5) Professional Engineers, two (2) PhD's, one (1) Registered Roof Consultant, three (3) staff engineers, five (5) American Concrete Institute (ACI) / Michigan Concrete Association (MCA) Certified Level I Concrete Inspectors, three (3) MCA Certified Level II Concrete Inspectors, ten (10) MDOT HMA Certified Technicians, and five (5) MDOT Certified Density Control Technicians.

If needed, the Metro offices have support staff available from the other PSI Michigan offices in addition to the full support of PSI's 100 offices nationwide in 30 states and employing about 2,200 people. Of these employees, 800 are engineers or other professionals, 1,100 are technicians and 300 are administrative personnel. PSI is currently ranked 14th of the top 50 by Engineering News Record as one of the nation's largest consulting engineering firms and is considered the leading firm of our type in the A/E/C industry.

Staff members experience and education are discussed in Section C and full resume of Key Staff are included in Attachment I.

Section B - Statement of Understanding of the General Scope of Services

We understand that The City of Novi has a continuing need for a geotechnical and material testing consultant to support their capital programs. The selected firm(s) would work with other consultants and construction management firms to assure the success of the City of Novi’s capital plans. If selected, PSI would be one of two firms that the City of Novi would consult with for the geotechnical and material testing scope of work on City of Novi construction projects. The City of Novi advised that these projects would be generally categorized into the following, all of which PSI has significant experience:

- Road Rehabilitation/Reconstruction
- Traffic Signal Replacement
- Sidewalk/Pathway Construction
- Water Main Construction
- Sanitary Sewer Rehabilitation

Initial Planning Phase: At the beginning of each project, Intertek-PSI will discuss the project needs with the City and/or the City’s engineering consultant to determine the location and number of soil borings or pavement cores needed for the project. We will work with the City’s engineer to develop an efficient geologic/geotechnical investigation and identify critical issues/project elements that may impact design and construction as early in project development as possible.

Once awarded by the City, we would perform the field work agreed upon in the scope of services for each project and provide reports as necessary to the City and the City’s engineering consultant to assist in the design phase of the project.

Prior to Construction: Prior to the construction phase of each project, we would discuss and/or meet with the City and/or the City’s engineering consultant to determine the scope of services for material testing in the construction phase of the project. Based on the specific job requirements and anticipated deliverables, our project manager will coordinate the construction inspection and material testing services and provide support and consultation about unusual subsurface and construction problems. Our "project management" approach provides an effective mechanism for problem resolution and serves as a cost-effective, built-in measure for quality assurance on all our projects.

During Construction: Intertek-PSI will perform the field work agreed upon in the scope of services for each project and provide routine reports as necessary to the City and the City’s engineering consultant within one week of each site visit.

For this phase of the project, we will assign an experienced engineering inspector(s) to provide construction inspection and documentation during construction. These services will be provided for the roads, curbs, sidewalks, and underground utilities and will include:

- On-site construction inspection and documentation of construction activities for compliance with the contract documents.
- Maintain field notes and quantity reports for daily submittal to the City of Novi, and/or their engineering consultant.
- Inspection and documentation of sub-grade preparation and record undercut quantities.
- Inform the City of Novi’s representative of daily activities, construction progress, problems encountered as well as remedial actions, and actual field construction quantities, as needed.

- Provide and coordinate materials testing services.
- Provide other services requested by the City of Novi as required by the contract.

All reports or test results will be submitted electronically to the individuals identified by the City. PSI would report any failing tests in the field and would document and immediately bring to the attention of the City and the City’s engineering consultant.

The electronic submittal of the daily field reports will be prepared using QESTField. QESTField is a product designed for laboratory operations that are using the QESTLab Laboratory Information Management System in their construction materials and geotechnical testing laboratories. QESTField is a solution for field technicians to replace paper-based information gathering onsite. The technician can see the work requests allocated to them for the day and register details of samples taken in the field and tests performed in the field. All of this is done with real time access back to QESTLab so the field technician has access to the latest laboratory information such as maximum dry density results. Likewise, the field test information is immediately available to laboratory staff for work scheduling and reporting purposes.

Additionally, we would:

- Attend all pre-construction meetings.
- Coordinate with Miss Dig before any investigation work is started.
- Be available with twenty-four (24) hour notice for material testing.

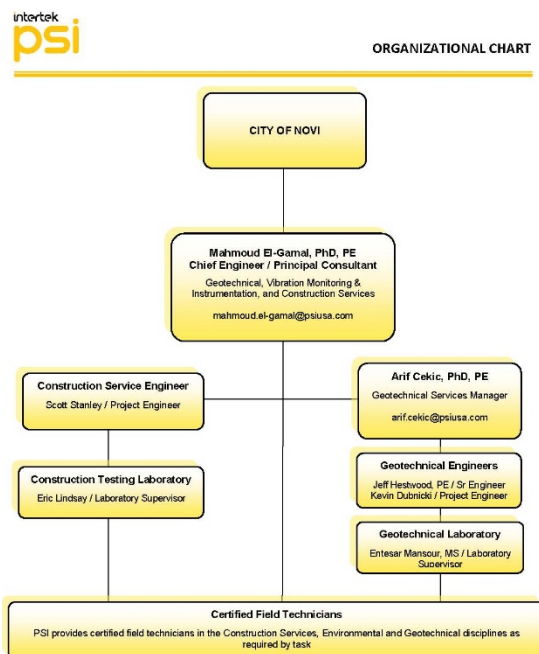
We would plan to utilize our Farmington Hills Office / Lab and staff, which is less than 5 miles from the Novi Civic Center.

Intertek-PSI has successfully served under similar contracts for local cities including the City of Troy, City of Dearborn, City of Ann Arbor. Please see the Section D2 for Past Project Experience examples.

Section C- Staffing / Key Resumes

PSI proposes to staff the City of Novi Geotechnical Engineering Consultant Services Contract with the individuals listed below. The resumes of "Key Individuals" designated by "*" are included at the end of Section C.

Chief Engineer, Principal Consultant, Mahmoud El-Gamal, Ph.D., P.E., D.GE.* Mr. El-Gamal serves as PSI’s Southeast Michigan’s Vice President has over (31) years of experience in conducting geotechnical and construction engineering and currently works from our Detroit and Farmington Hills, Michigan office. Dr. El-Gamal will serve as the Senior Program Director/ Project Consultant on this contract. He is familiar with codes and specifications of the Michigan Department of Transportation (MDOT), Federal Highway



Administration (FHA), Federal Aviation Administration (FAA), American Association of State Highway Transportation Officials (AASHTO), American Society of Testing and Materials (ASTM), Unified Building Code (UBC), and several state and city building codes. As senior engineer, consultant, and a Professor at Wayne State University, his responsibilities include, but are not limited to, analyzing field and laboratory test results and review of reports and recommendations.

Department Manager and Principal Consultant Arif Cekic, Ph.D., P.E.*Chi

Dr. Cekic provides geotechnical and Constructing Inspection and Testing consulting for projects of a complex and comprehensive nature. In the capacity of senior technical professional, he has extensive experience serving as the project manager and engineer for a wide variety of commercial, industrial, and transportation projects. He captures both academic experience by teaching at several institutions within southeast Michigan and practical experience from more than 16 years in the field. Dr. Cekic has been with PSI for ten (10) years and has been involved on various projects throughout Metro Detroit, which makes him an asset to the project team for the City of Novi. Dr. Cekic will serve as Project Manager / Coordinator for Geotechnical Services for the project. Mr. Cekic will be actively involved in all Task Orders involving geological analysis.

Project Manager: Jeffrey D. Hestwood, P.E.*

Mr. Hestwood is a licensed professional engineer in the State of Michigan with over thirty (30) years of experience in geotechnical engineering and is a Principal Consultant. Mr. Hestwood has been with PSI for over twenty (20) years and has been involved on various types of projects during that time. Mr. Hestwood will serve as the Senior Project Consultant for the as needed Geotechnical Consultation Services for this project which includes addressing any soil related issues that may arise during the course of the projects.

Project Manager: Kevin Dubnicki, P.E.*

Mr. Dubnicki is a project manager in the geotechnical services department of PSI's Farmington Hills Office. His responsibilities include providing technical reports, recommendations and designs for flexible and rigid pavement sections, deep and shallow foundations, utility tunneling, performing engineering classification and testing, drilling operations, Quality Assurance (QA), infiltration testing, soil resistivity testing, vibration monitor, vertical inclinometer and tiltmeter installation and instrumentation monitoring. Additionally, Mr. Dubnicki has provided service for in the construction quality control (QC) and testing services of PSI. His responsibilities have included foundation inspection for strip footings, caissons, rammed aggregate piers, steel pile installations, soils testing, and laboratory and field testing of grout, concrete, and asphalt. In addition to these, he has performed test pit, proofrolling, soil resistivity testing, and undercutting inspections for various jobs throughout Michigan.

Project Engineer: Scott A. Stanley, EIT *

Mr. Stanley is a degreed engineer with over twenty-six (26) years of experience in design and construction and is a Special Project Manager/Project Engineer in the Construction Services Department of the Farmington Hills PSI office. Mr. Stanley has served as design and construction engineer for various

municipalities and governmental agencies and has overseen the annual improvement programs for asphalt paving, curb and gutter, sidewalk and concrete and asphalt paving and rehabilitation projects. In addition, his experience working with stakeholders from both the public and governmental bodies make him uniquely suited to assure services provided by PSI meet the needs of the City of Novi.

Lab Supervisor: Eric Lindsay *

Mr. Lindsay is the lead laboratory technician in the Construction Services Department of the Farmington Hills PSI office with nine (9) years of experience in construction materials testing and observation. Mr. Lindsay is an American Concrete Institute (ACI) Certified Level I and Level II Concrete Field Technician, a Michigan Department of Transportation (MDOT) Certified Aggregate Technician and an ACI Level I Certified Concrete Laboratory Technician. Mr. Lindsay will serve as the Soils, Asphalt and Concrete Laboratory Supervisor, all soils and concrete laboratory work for the project will be performed by Mr. Lindsay or under his direct supervision.

Geo Lab Supervisor: Entesar Mansour, MS *

Mrs. Mansour sets up and performs laboratory tests following detailed instructions and procedures for PSI’s local Farmington Hills, Michigan office as well as other PSI offices in the State of Michigan. Mrs. Mansour makes detailed observations of soil conditions, documents testing data and results and gives limited interpretation of results. Mrs. Mansour is also responsible for overseeing laboratory work performed by other laboratory personnel and is responsible for the maintenance of the laboratory equipment/supplies. Mrs. Mansour is qualified to perform the following tests: Soil Sampling, Transportation and Preparation, Moisture Content, Organic Content, Unit Weight, Unconfined Compression, Atterberg Limits, Sieve Analysis (Mechanical & Full), Loss by Wash (P-200), Standard Proctor ASTM D698, Modified Proctor D1557, California Bearing Ratio (CBR), Permeability – Constant and Falling Head, Specific Gravity, Consolidation, Resistivity. Classifying soil using USCS system. Geotechnical exploration and analysis for the site, using Bentley/gINT software.

Field Technicians

PSI has numerous field technicians with Level 1 Concrete Field-Testing Certification (MCA) and MDOT Density Technology Certification:

- Staff with MDOT Density Technology Certification: Fernando Cazares, Alida Parker, Ahmd Shakir, Joe Tatum and Paul Wheat, Helal Rizk
- Staff with Concrete Field-Testing Certification (MCA): Fernando Cazares, Alida Parker, Ahmd Shakir, Joe Tatum and Paul Wheat Richard Howell

Resumes of Key Individuals “*” are provided in Attachment I

Section D - Qualification Section

1. General Summary of Firms Capabilities

Distinguished as both a local and a national leader in engineering and environmental services, PSI is a recognized leader in many disciplines including the following:

- Geotechnical Engineering
- Construction Materials Testing and Special Inspection
- Environmental Consulting
- Industrial Hygiene
- Nondestructive Examination
- Pavement Evaluation Services
- Building Science Solutions
- Building Envelope
- Curtainwall
- Acoustic
- Fire/Life Safety
- Technology
- Roof Consulting

PSI provides its clients with Information to Build On in making knowledgeable, cost-effective business decisions that help their clients reduce expenses, improve quality and decrease liabilities.

A Commitment to Excellence

PSI maintains the highest professional and ethical standards, which include an economic awareness to provide the highest quality of personnel and service at a reasonable cost to our clients. Our unique combination of local, independent offices and nationwide resources means our project managers have the full responsibility for managing your local projects and have the national resources to handle the most challenging and complex projects, regardless of size.

PSI can provide outstanding consulting engineering and testing services; however, most of all we desire to demonstrate our commitment to excellence.

While PSI’s growth has been notable, even more impressive has been our ability to grow without sacrificing our technical knowledge or personalized attention to our clients. Recognition of the importance of our clients and repeat business has been a key factor in PSI’s success. PSI will not sacrifice quality, value, or service to our clients.

Our staff of professionals consists of the following:

- Professional Engineers (PE/PEng)
- Registered Roof Consultants (RRC)
- Registered Architects (AIA)
- Certified Industrial Hygienists (CIH)
- Registered Soil Scientists
- Engineers-In-Training (EIT)
- Registered Geologists

Our field and laboratory technicians are trained in-house and at special schools and seminars. Our project managers and technicians are certified by associations such as the following and work with other specialized organizations within each discipline.

- Roofing Industry Educational Institute (RIEI)
- Roof Consultants Institute (RCI)
- American Concrete Institute (ACI)
- National Institute for the Certification of Engineering Technicians (NICET)
- American Welding Society (AWS)
- International Code Council (ICC)

- International Fire Council (IFC)

Since our founding, we have dedicated ourselves to excellence both in our technical expertise and in customer service. It is this principal upon which we have based our organization and established a national reputation as a leader in the field of professional engineering, testing and consulting services.

Below we will go in more detailed qualification of our geotechnical area and construction material testing and inspection service which we expect to be the primary focus of our work with the City of Novi.

Geotechnical Engineering

Where infrastructure improvements are concerned, conditions below grade are often as important as surface conditions, especially when construction is contemplated. The most cost-effective way to ascertain subsurface conditions is by obtaining geotechnical services such as those provided by the professionals at Professional Service Industries, Inc. (PSI), an Intertek company.

Geotechnical conditions play a crucial role in proper construction of buildings, roads, runways, bridges, dams and other structures. A solid foundation is an essential prerequisite for any well-constructed improvement. A thorough subsurface exploration can result in a more cost-effective foundation design and reduce construction delays caused by unforeseen conditions.

Quality is an integral part of PSI's approach to geotechnical work. Our principal consultants, professional engineers with years of demonstrated experience, are the crux of our quality assurance program. These principal consultants review all reports and documentation on each project to make certain that PSI's methodologies and contractual agreements are strictly followed, and that conclusions and recommendations are valid, effective and practical. In addition, field and laboratory personnel receive intensive training from seasoned veterans before they begin working in the field.

PSI is experienced. Tens of thousands of subsurface explorations have been performed by PSI personnel on a wide variety of projects. Our experience ranges from projects requiring a few soil borings to large projects requiring several hundred borings.

Equipment and Facilities

PSI maintains a large variety of land and marine subsurface exploration equipment, along with laboratory and office facilities. We have more than 100 fully-equipped exploration crews with drill rigs mounted on all types of carriers to allow access to virtually any condition on land or water. The principal type of drilling equipment we maintain are CME and mobile auger rigs. Typically, the crews are supervised in the field by an engineer or graduate geologist. The variety of sizes and types of equipment and our crews' broad experience permit flexibility in sampling and drilling techniques and in scheduling.

Preliminary or General Studies

- Site preparation specifications
- Early site selection
- Design of pond and landfill liners
- Preliminary soil and foundation evaluation
- Embankment settlement
- Foundations for structures
- Vibration studies
- Slope stability and design

Foundation/Specialty Analysis

- Risk assessment
- Foundations/construction over compressible soils
- Subsoil modification
- Analysis of high-rise foundations
- Dewatering concepts
- Soil mechanics research
- Specialty foundations
- Retaining walls
- Interpretation of cone penetration test data
- Landfill foundation studies
- Earthen dam analysis
- Pile driving analyzer

Environmental/Permitting

- Environmental permits
- Groundwater studies
- Soil suitability analysis
- Effluent disposal evaluation
- Well and pollution source inventory
- Design of pond and landfill liners
- Water supply testing and permitting
- Septic tank design and permitting
- Drawdown effects on wetlands
- Sanitary landfill permitting

Roadway/Transportation Studies

- Corridor study/fatal flaw analysis
- Bridge foundations (shallow and deep)
- Pavement design
- Field and Drilling Services
- Standard test borings
- Auger borings
- Rock coring
- Monitoring well installation
- Continuous sampling
- Environmental sampling
- Undisturbed thin-walled tubes
- Groundwater sampling
- Bulk disturbed samples
- Mineral exploration

Laboratory Services

- Soil classification
- Strength parameters
- Consolidation
- Compaction
- Permeability
- CBR
- Soil cement
- Triaxial
- Relative density

Groundwater Monitoring Plans

- Design and implementation of groundwater monitoring plans
- Installation of monitoring wells
- Sampling of groundwater from monitoring wells

Additional Services

- Hydrology
- Earthquake geology and engineering
- Environmental geology
- Soil stabilization
- Geophysical investigations
- Soil/rock dynamic

Construction Materials Testing and Special Inspection Services

The construction of transportation projects, including bridges, dams, embankments, roads, airport runways, offshore structures, and other types of facilities, requires precise planning, careful design, rigorous execution and the expenditure of a great deal of money. Thus, it is extremely important that all work and materials be of the highest quality to assure that specifications, schedules and budgets are met. One way to do this is by using the services of PSI, an independent quality control and testing consultant.

Professional Service Industries, Inc. (PSI), an Intertek company, has been providing construction quality control services since its founding in 1962. Pittsburgh Testing Laboratory, a subsidiary of PSI, tested the original cables for the Brooklyn Bridge in the 1880s; in recent years the firm tested the replacement cables. No other testing and inspection firm has that kind of history and continuity.

PSI holds certifications and approvals from industry and trade organizations, federal government agencies and individual states for a variety of services and procedures. Your local PSI office will be happy to provide you with an applicable list for your area.

Wide Range of Services

PSI’s construction services can serve a variety of projects. Construction Services can be provided from intermittent (call-out basis) or continuous (full-time) basis. PSI’s specialty is the ability to mobilize an onsite laboratory with a materials testing manager and a complete staff of special inspectors. All field activities are supported by the bench strength of Licensed Engineers acting as Principal Consultants. PSI has over 100 established office laboratories that offer more diversified materials testing than any other Independent Testing Laboratory. In addition to standard test procedures as established by ASTM, DOT’s, or the Corps. of Engineers, PSI can develop and simulate specific test environments to satisfy client needs.

PSI maintains complete facilities and equipment for inspection and testing of soils and foundations, concrete, pavements, masonry, structural, metals, roofing and specialty areas. In addition, PSI has an in-house Quality Assurance Manual (QAM), Standard Operating Procedures (SOP), and a Technical Operating Procedures (TOP) Manual to guide and document operations.

Soils and Foundations

- Exploration and soil borings
- Rock core drilling and exploration
- Laboratory testing and analysis
- Field testing, inspection and control
- Grout stabilization inspection
- Deep foundations testing and inspection
- Reinforced earth construction

Concrete

- Cement physical and chemical testing
- Mix design
- Strength testing compressive, flexural and split tensile
- Field testing and inspection
- In-situ evaluation
- Reinforcement location
- Prestressed and precast concrete testing and inspection
- Aggregate unit weight, gradation, etc.

**Pavements**

- Preconstruction services
- Soil density testing
- Soil stabilization testing
- Soil-cement
- Laboratory testing of asphalt
- Field testing and inspection
- Concrete pavement testing and inspection
- Pavement evaluation and failure investigation
- Underdrains

Masonry

- Concrete masonry unit testing
- Mortar/stucco mix design, testing and inspection
- Brick testing
- Construction testing and inspection
- Failure investigation
- Prisms construction control

Structural

- Threshold inspections
- Post-tensioning calibration and inspection
- Fireproofing thickness, weight and adhesion/ cohesion
- Reinforcing steel

Metals

- Structural steel fabrication inspection and certification
- Structural steel field erection inspection
- Weld certification and procedure qualification
- Construction inspection and testing
- Nondestructive examination
- Laboratory testing

Roofing

- Field evaluation and testing
- Monitoring of roof application
- Laboratory testing
- Maintenance management services



Specialty

- Floor flatness profiling
- Vibration monitoring
- Load tests
- Failure investigations
- Curtainwall mock-up and fabrication inspection
- Review of waterproofing specifications
- Monitoring of waterproofing application

2. Descriptions of projects Similar in Nature to Services Described in the RFP

Project Sheets Provided in Attachment II, Partial Listing is provided below:

- City of Ann Arbor, Roadway and Sewer Improvements
- City of Dearborn, Roadway, Sidewalk and Sewer Improvements
- Charles E. Raines Company, Roadway & Sewer Projects for Cities of Flat Rock, Melvindale, Riverview, Allen Park & Gibraltar, MI,
- Detroit Economic Growth Corporation, I94 Corridor Redevelopment, City of Detroit Near the Junction of I-75 and I-94
- Representative Highway/Roadway Experience: Cities of Dearborn, Novi, Ann Arbor, MDOT, Genesee County Road Commission, St. Clair County Road Commission, Lapeer County Road Commission
- Representative Bridge Experience: Delaware-Morehead Bridge, Single Span Bridge over Little Creek at US-24; I-75 11 Bridges; Island Park Pedestrian Bridge
- Representative Traffic Signal Projects: East Lansing Ingham County, Allen Road & W. Outer Drive, 1426 Walnut, Wayne County
- Representative Sewer & Water Main Experience: Charter Township of Canton, City of Burton, Grosse Ile Township, Jackson, Ypsilanti

- Representative Trail Pathway Projects: Trail along Cherry Hill, Canton, MI; Mid-Michigan Community Pathway, Along US 127

3. Names of Key Staff on Referenced Projects and Role in Novi Projects

**Key Staff on Representative City/County/State
Construction Projects
Geotechnical and Material Testing**

Project Information					Key Staff				
Client	Project Type	Geo	CS	Time - frame	Mahmoud El-Gamal, PhD, PE, Director	Arif Cekic, PhD, PE, Project Mgr.	Scott Stanley, Project Engr.	Eric Lindsay, CS Lab Mgr.	Entesar Mansour, Geo Lab Mgr.
City of Ann Arbor	Roadway and Sewer	x	x	2008 - ongoing	x	x	x	x	x
City of Dearborn	Roadway, Sidewalk and Sewer	x	x	2008 - ongoing	x	x	x	x	x
Charles Raines Co. for Cities of Flat Rock, Melvindale, Riverview, Allen Park & Gibraltar	Roadway and Sewer		x	2015 - ongoing	x		x	x	
Detroit Economic Development Corp.	Roadway, Sideway and future Vertical Infrastructure	x		2014 - 2016	x	x			x
Lapeer County Road Commission	Road Improvements	x		2017	x	x			x
City of Troy	Water Main Improvements	x		2016-2018	x	x			x
Charter Township of Canton	Water Main Improvements	x		2016	x	x			x
Genesee County Drain Commission	Pump Station Relocation	x	x	2017	x	x	x	x	x
Michigan Department of Transportation	Misc. Roadway Improvements	x	x	2005 - 2018	x	x	x	x	x
Genesee County Road Commission	Traffic Signal – Roadway Improvements	x	x	2015-2016	x	x		x	x

4. Client References are included on the Project Sheets and are listed below:

- City of Dearborn, Roadway, Sidewalk and Sewer Improvements, 2008 – ongoing (See Project Sheet 1)
 - Ed Sajewski, 734-943-2375; esajewsk@ci.dearborn.mi.us
- City of Ann Arbor, Roadway & Sewer Improvements, Annual contracts – ongoing (See Project Sheet 2)
 - David Dykman, P.E., Project Manager, ddykman@a2gov.org, 734.794.6410, extension 43685
- Charles E. Raines Company, for Cities of Flat Rock, Melvindale, Riverview, Allen Park and Gibraltar, MI, Roadway & Sewer Improvements, 2015 – ongoing (See Project Sheet 3)
 - Bill Bettendorf, 313-285-7510; bbettendorf@charlesraines.com
- Detroit Economic Development Corporation, I94 Industrial Corridor Redevelopment Geotechnical Investigation for future Roadway, Sidewalk and Vertical Infrastructure Improvements, 2014 – 2016, (See Project Sheet 4)
 - Cleveland Dailey III, 313-963-2490, cdailey@degc.org

This proposal submitted by:

Company (Legal Registration) Professional Services Industries, Inc. (PSI)

Address 37483 Interchange Drive

City Farmington Hills State MI Zip 48335

Telephone 248-957-9911 Fax _____

Representative's Name Dr. Mahmoud El-Gamal, Ph.D., P.E., D.GE

Representative's Title Vice President/Chief Engineer

Authorized Signature 

E-mail mahmoud.el-gamal@intertek.com

Date November 6, 2018

Attachments I

Resumes

Experience

Year started with PSI:	1998
Years experience with other firms:	12

Education

- PhD in Geo/Earthquake Engineering, University of Nevada, Reno, 1996
- MS in Geo/Earthquake Engineering, University of Nevada, Reno, 1996
- BS in Structural Engineering, El-Mansoura University, Egypt, 1986

Certifications/Registrations/Technical Training

- Certified Concrete Inspector (ACI), Level I/II, Ohio, 1997
- Drilling Operations Managers Workshop, PSI, 2001
- Professional Engineer, #46372, Michigan, 2000
- Professional Engineer, #E64535, Ohio, 2000
- Radiation Safety, Nuclear Density Gauge Operator, Ohio, 1997

Affiliations/Memberships

- National Society of Professional Engineers
- American Society of Civil Engineers (ASCE)
- Earthquake Engineering Research Institute (EERI)

Professional Experience

Mr. El-Gamal has over 31 years of experience in conducting geotechnical-engineering projects. He is familiar with all aspects of seismic design analysis and numerical modeling of bridges and buildings, including the quantification of geotechnical issues.

In addition, he is experienced in soil response under static and dynamic loading, including liquefaction behavior, dynamic behavior of rigid and flexible retaining walls, interpretation of centrifuge model behavior, seismic risk analysis, bridge abutment design/seismic behavior, bridge abutment movement, bridge foundation and abutment stiffness assessment and analysis, soil deformation under seismic excitation, slope deformation and stability analysis, and all aspects of subsurface investigations. He is familiar with codes and specifications of Ohio Department of Transportation (ODOT), Michigan Department of Transportation (MDOT), Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), American Association of State Highway Transportation Officials (AASHTO), American Society of Testing and Materials (ASTM), Unified Building Code (UBC), and several state and city building codes. He is also proficient with several software packages including ELSYMS, SHAKE, SEEP, FEADAM, LPILE, SPECTRA, T-Z PROGRAM, GTGS, IMAGES3D, CONSOL, WEAP, PCSTABL5M, PICAP3, GINT, PCAP, GYGEN, TZGEN, PSA, PSL, and AutoCAD. As chief engineer, his responsibilities include but are not limited to analyzed field and laboratory test results. He also does field investigation including crack monitoring and settlement evaluations. He has performed geotechnical engineering analysis needed to formulate the design of rock and soil anchors, shallow and deep foundations, retaining structures, dams, cell towers, highway embankments, bridges, and pavements.

Representative Transportation Project Experience

- 2009 Street paving project - M-539, Northfield, Harding & Stratford Avenues; City of Oak Park,

Michigan – Project Manager for geotechnical drilling, sampling and reporting.

- Newburgh Road Reconstruction between Glenwood and Michigan Avenue, City of Wayne, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- Pasadena Avenue Pavement Reconstruction, Mt Morris and Flint Township, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- East Stadium Boulevard over Ann Arbor Railroad and over State Street; City of Ann Arbor, Michigan – Project engineer for bridge replacement structures included MDOT pile foundation analysis, MSE wall, water main and pavement re-construction.
- US-12 (Michigan Avenue), State Road and State Street reconstruction; Pittsfield Township, Michigan. Project engineer for roadway reconstruction and widening project, included flexible and rigid pavement designs.
- Newburgh Road over Rouge River; Wayne County, Michigan – Project engineer for bridge replacement structure included MDOT pile foundation and lateral pile capacity analysis.
- EB I-94 and WB I-94 over Inkster Road, Wayne County, Michigan – Project Engineer for bridge replacement structures included MDOT pile foundation and global stability analysis with earth pressure diagrams for support of temporary retaining structures during staged construction. (2002)
- MDOT I-69; Flint, Michigan area - Project Manager for subsurface exploration for 20 miles of roadway pavement design
- Aeropark Roadway Improvement; Romulus, Michigan - Project Manager for subsurface exploration for 15 miles of roadway improvement and reconstruction/redesign
- Ridge Road; Canton, Michigan - Project Manager for subsurface exploration for 1 mile of roadway reconstruction & redesign
- East Stadium Boulevard; Ann Arbor, Michigan - Project Manager for subsurface exploration for roadway redesign and reconstruction.
- M-99; Hillsdale, Michigan - Project Manager for Pre- and Post- Construction Condition Assessment (PCCA) and vibration monitoring for roadway demolition and reconstruction.
- DDOT Shoemaker Facility; Detroit, Michigan – Project Manager for investigation of rehabilitation of the bus facility and complete pavement design and analysis.
- DDOT Central Facility; Detroit, Michigan – Project Manager for investigation of rehabilitation of the bus facility and complete pavement design and analysis.
- DDOT Coolidge Facility; Detroit, Michigan – Project Manager for investigation of rehabilitation of the bus facility and complete pavement design and analysis.
- 2005 City of Livonia Street Paving Projects, Michigan – Project Manager for subsurface exploration of the city roadways rehabilitation and parking areas.
- 2005 and 2007 City of Novi Street Paving Projects, Michigan – Project Manager for subsurface exploration of the city roadways rehabilitation and parking areas.
- 2007 City of Oak Park Street Paving Projects, Michigan – Project Manager for subsurface exploration of the city roadways rehabilitation and parking areas.
- US-10 Interchange; Midland, Michigan – Project Manager for a bridge replacement structure and construction of new entrance and exit ramp. Included MDOT roadway and pile foundation and global stability analysis. (2000)
- MDOT Gratiot County, Michigan – Project Engineer for pile foundation analysis and embankment stability with settlement analysis of US-27 Interchange at M-57.
- US-24 under Orchard Lake Road; Oakland County, Michigan – Project Engineer for bridge



- replacement structure including MDOT Spread foundation analysis and settlement evaluation.
- US-24 Oakland County Line to I-69 over US-12; Branch County, Michigan – Project Engineer for a roadway expansion to 4-lane divided highway for a distance of 9.1 miles.
 - North and south bounds of I-69 over US-12, Branch County, Michigan – Project Manager for a bridge replacement structure including MDOT Spread footing and stability analysis and strain pole design.
 - M-86 over St. Joseph River, Three Rivers, Michigan – Project Engineer for bridge replacement structure included MDOT pile foundation and FHWA drilled shaft analysis, MDOT strain pole analysis for new sign and signal poles and identification of existing bridge structure foundation limits (2000)
 - US 27 Interchange at M-57, Washington Township, Gratiot County, Michigan – Project Engineer for new interchange including MDOT pile foundation analysis, embankment stability and settlement analysis (1999)
 - Griswold Road Bridge over CSX Railroad, Northville Township, Wayne County, Michigan – Project Engineer for bridge replacement structure with MSE wall supported abutments, included global stability and settlement analysis of MSE wall/bridge system (1999)
 - US-24 under Orchard Lake Road, Oakland County, Michigan – Project Engineer for bridge replacement structure included MDOT spread footing foundation analysis (1999)
 - Detroit-Windsor Ferry, Michigan – Project Manager for deep foundation design.
 - 20,000-Car Parking Structure; Columbus Airport, Ohio – Project manager for soil investigation to build six-story parking structure with two-story underground, including deep foundation design and analysis with special underground tunneling system.
 - BP Energy Pre-Trip Return Track Retaining Wall, St. Clair, Michigan – Project Manager for design of a 450-foot long, tie-back sheet pile retaining structure between double track railroad grade and the Pine River in soft lacustrine clays.
 - Griswold Road Bridge over CSX railroad; Wayne County, Michigan – Project Manager for a bridge replacement structure with MSE wall and bridge system including MDOT foundation design.
 - Radiation Monitor Structure – Project Manager for subsurface exploration of Detroit-Windsor Ferry Crossing Facility, including sheet piling design and foundation analysis.
 - Lake St. Clair Light # 30; Lake St. Clair, Michigan – Project Manager for an off-shore light house structure include down hole vane shear testing and design of sheet pile coffer dam and driven piles.
 - State of Ohio – Project Manager for over 100 bridges and culvers including one suspension bridge crossing Ohio River to Kentucky.
 - Ohio Turnpike; Summit/Cuyahoga Counties, Ohio - Project Manager for soil investigation to build new interchange for I-77/SR-21 and new bridges and all ramp retaining systems and MSE Walls.
 - State of Ohio - Project Manager for more than 75 bridges on deep and shallow foundations including one suspension bridge over Ohio River.

Representative Commercial Project Experience

- Toyota Technical Center, York Township, Michigan - Project Manager for construction inspection and testing services.
- Wal-Mart Store, Bryan, Ohio – Project Manager for a 150,000 square foot (sf) new store with associated parking areas, access driveways, garden center and fuel facility.
- Wal-Mart Store relocation, Wauseon, Ohio - Project Manager for a 150,000 sf new store with associated parking areas, access driveways, garden center and fuel facility.



- Sam's Club Store relocation, Pittsfield, Michigan - Project Manager for a 140,000 sf new store with associated parking areas, access driveways, garden center and fuel facility. In addition, the project included the traffic study and widening of Carpenter Road.
- Costco Wholesale Store, Commerce Township, Michigan – Project Manager for a 150,000 sf new store with associated parking areas, access driveways and fuel facility.
- Costco Wholesale Store, Livonia, Michigan – Project Manager for a new parking area, access driveways and fuel facility.
- Costco Wholesale Store, Grand Rapids, Michigan – Project Manager for a 160,000 sf new store with associated parking areas, access driveways and fuel facility.
- Home Depot; Detroit, Michigan - Project Manager for a 150,000 sf new store with associated parking areas, access driveways and garden center.
- Home Depot, Ludington, Michigan - Project Manager for a 150,000 sf new store with associated parking areas, access driveways and garden center.
- Lowe's Store, Northville, Michigan - Project Manager for a 148,000 sf new store with associated parking areas, access driveways and garden center.
- Lowe's Store, Lansing, Michigan - Project Manager for a 136,000 sf new store with associated parking areas, access driveways and garden center.
- Lowe's Store, Macomb, Michigan - Project Manager for a 150,000 sf new store with associated parking areas, access driveways and garden center.
- Kool Development Headquarter; Auburn Hills, Michigan – Project Manager for investigation of six-story structure with associated parking areas and retaining walls.

Representative Water, Drain Project Experience

- Lake Huron Water Initiative (LHWI) – Project coordinator for 67-mile pipeline for new raw water transmission line through 4 counties from Lake Huron to the City of Flint. Project included over 300 soil borings and subsurface drilling from a barge for intakes in Lake Huron
- Ann Arbor Waste Water Treatment Plant – Project coordinator for renovations to existing facility including rehabilitating flow control structures, demolition and replacement of primary and secondary treatment equipment and construction of new buildings.
- Algonac Sewer Treatment Plant – Project manager for underground storage tank including pile design and pile group analysis.
- Macomb County, Michigan-Project Manager for investigation for 3 miles of 60-inch sanitary sewer project including temporary and permanent earth support systems to depths ranging from 20 to 25 feet.
- Genesee County Drain Commission- Project Manager for Phase I for the soil investigation of installation 13-mile sanitary sewer.
- Genesee County Drain Commission- Project Manager for the soil investigation of installation 7.5-mile water main including temporary retaining systems, pipe jacking and tunneling.
- City of Flint- Project Manager for the soil investigation of installation 24-inch water main including temporary retaining systems and pipe jacking.
- Wayne County- Project Manager for the soil investigation of underground monolithic equipment monitoring concrete box approximately 35 feet deep.
- Paw Paw River Watervilet Paper Company Storm Water relocation including underground dam, sheet piling, grouting with 84" sanitary line installation.



- St. Clair Waste Water Treatment Plant – Project manager for two underground tanks, filtration tank and design and analysis of retaining wall.
- Lake Huron Wash-Water Treatment Plant – Project manager for two-story underground basin and outfall design and analysis of retaining wall, uplift and hydrostatic pressure.

Representative Residential Project Experience

- Bloomfield Park Development; Bloomfield Hills, Michigan - Project Manager for subsurface exploration for residential and commercial buildings with underground parking structures.
- Royal Oak Development; Royal Oak, Michigan - Project Manager for subsurface exploration of three ten-story residential and commercial buildings with two-story underground parking structures.
- U of M Student Housing Buildings – Project Manager for geotechnical exploration of two five-story residential buildings with retaining wall design and slope stability analysis.

Representative Construction Services Project Experience

- Genesee County Drain Commission - Project Manager for installation of 13-mile sanitary sewer 1st phase.
- Genesee County Drain Commission - Project Manager for installation of 10-mile water main including temporary retaining systems, pipe jacking, and tunneling.
- Wayne County- Project Manager for investigation of underground equipment monitoring concrete box approximately 35' deep.
- Ford Motor Company; Wayne County, Michigan - Project Manager for soil investigation for installation of CMM machine and press equipment on pile foundations.
- Arcadis Giffel; Wayne County, Michigan - Project Manager for soil investigation for installation of CMM machine and press equipment on pile foundations and parking areas.
- Ecorse Public Schools; Wayne County, Michigan - Project manager for soil investigation to build five new schools with their gymnasiums, facilities, stadiums, playgrounds, and parking areas.

Representative Miscellaneous Project Experience

- I-94 Industrial Corridor Redevelopment, Detroit, Michigan – Project coordinator for 186-acre industrial park redevelopment plan. Services included Geotechnical, Environmental, Construction Testing, GPR and Land Surveying.
- Great Lakes Crossing Parking Lot Improvements, City of Auburn Hills, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- State of Michigan – Project Manager for over 150 cellular sites including monopole, freestanding lattice and guyed tower structures.
- Belle Isle Brownfield site development; Detroit, Michigan – Project Manager for investigation and large-scale monitoring well installation and coordination.
- Huron – Clinton Metropolitan Authority park development – Project manager for several developments at several parks including docks, buildings and roadways.
- US Coast Guard Base, St. Clair, Michigan – Project manager for site development including buildings, parking and access driveways.
- Psychiatric Hospital, York Township, Michigan - Project manager for investigation to build a new hospital on 25-acre site including five-story buildings, underground facility, parking areas and housing facilities.



- Bishop Creek Retaining Wall, Novi, Michigan – Project Manager for 280-foot long cantilevered sheet pile retaining structure between parking lot and pond.
- Spencer Road and Old US-23 retaining wall, Brighton, Michigan – Project Manager for 600-foot long cantilevered sheet pile retaining wall structure between peat bog areas and the roadway.
- Ford Motor Company; Wayne County, Michigan-Project Manager for soil investigation for installation of CMM machine and press equipment on pile foundations.
- Arcadis Giffel; Wayne County, Michigan-Project manager for soil investigation for installation of CMM machine and press equipment on pile foundations and parking areas.
- GM Motor Company; Oakland County, Michigan-Project manager for soil investigation for installation of CMM machine and press equipment on pile foundations.
- Ecorse Public Schools; Wayne County, Michigan-Project manager for soil investigation to build five new schools with their gymnasiums, facilities, stadiums, playgrounds, and parking areas.
- Barakos-Landino Inc; Michigan-Project manager for soil investigation of six new Rite-Aids in southwest Michigan area with associates parking areas and temporary/permanent retaining systems.
- Cleveland Airport, Ohio - Project manager for investigation to build new interchanges, retaining walls and MSE walls.

Publications

- Siddharthan, R.V., El-Gamal, M.E. & Maragakis, E.A., "**Investigation of Performance of Bridge Abutment in Seismic Regions**", ASCE Journal of Structure Engineering, Vol. 120(4), April 1994, pp. 1327 - 1346.
- Siddharthan, R.V. & El-Gamal, M.E., "**Modeling of the Interaction of Water Waves With Nonlinear Porous Seabed**", Computers and Structures Journal, Vol. 51(5), June 1994, pp. 571 - 578.
Siddharthan, R.V. & El-Gamal, M.E., "**Earthquake-Induced Ground Settlements of Bridge Abutment Fills**", Analysis & Design of Retaining Structures Against Earthquakes, ASCE Special Geotechnical Publication No. 60, 1996, pp. 100-123.
- Siddharthan, R.V., El-Gamal, M.E. & Maragakis, E.A., "**Stiffnesses of Abutments on Spread Footing with Cohesionless Backfill**", Canadian Geotechnical Journal, Vol 34 (5), October 1997, pp. 686-697.
- El-Gamal, M.E. & Siddharthan, R.V., "**Stiffnesses of Abutments on Piles in Seismic Bridge Analysis**", Soils and Foundations Journal, Vol 38 (1), March 1998, pp. 77-87
- Siddharthan, R.V. & El-Gamal, M.E., "**Permanent Rotational Deformation of Dry Cohesion- less Slopes Under Seismic Excitations**", Transportation Research Record, No. 1633, TRB, 1998, pp. 45-50.
- Siddharthan, R.V., and El-Gamal, M.E., "**Investigation of Performance of Bridge Abutment Fills in 1994 Northridge Earthquake**", Seismic Response of Concrete Bridges, ACI Special Publications, No. SP-187, 1999 pp. 70-88.



Experience

Years with PSI:	2007
Years experience with other firms:	10

Education

- PhD in Philosophy in Civil and Environmental Engineering, Wayne State University, Detroit, 2005
- MS in Civil and Environmental Engineering, Wayne State University, Detroit, 2000
- BS in Civil Engineering, Istanbul Technical University, Turkey, 1996

Certifications/Registrations/Technical Training

- Professional Engineer, Michigan, 2007; No. 054682
- Concrete Strength Testing Training (ACI), Michigan, 2002
- Radiation Safety, Nuclear Density Gauge Operator, Michigan, 2000

Affiliations/Memberships

- ESD, Engineering Society of Detroit
- MSPE, Michigan Society of Civil Engineers

Professional Experience

Dr. Cekic provides Geotechnical and Constructing Inspection and Testing Consulting for projects of a complex and comprehensive nature. In the capacity of senior technical professional, he has extensive experience serving as the project manager and engineer for a wide variety of commercial, industrial, and transportation projects. He captures both academic experience by teaching at several institutions within southeast Michigan and practical experience from more than 21 years in the field.

Representative Project Experience

- I-75 Modernization - Project Coordinator for fast-track MDOT project
- MAASHTO-TPIMS - Project Coordinator for Truck Parking Information Management System signage at eight Rest Stops
- US-23 ATM Structures –Project Engineer for the ATM Structures
- City of Dearborn, Michigan - Geotechnical Investigations - Project Coordinator for geotechnical drilling, sampling and reporting of various types of projects including: Water Main Replacement; Road Resurfacing; CSO Storm Sewer Replacement; Storm Sewer Separation; Asphalt Street Resurfacing; Pavement Cores & Soil Borings
- City of Troy - Project Coordinator for geotechnical drilling, sampling and reporting for Roadway Rehabilitation and Water Main Replacement projects
- City of Oak Park, Michigan – Project Coordinator for geotechnical drilling, sampling and reporting for Street Paving Projects
- City of Wayne, Michigan - Project Coordinator for geotechnical drilling, sampling and reporting for Road Reconstruction Projects
- City of Ann Arbor, Michigan - Project Coordinator for geotechnical drilling, sampling and reporting for Street Improvements
- Mt Morris and Flint Township, Michigan - Pasadena Avenue Pavement Reconstruction, - Project Coordinator for geotechnical drilling, sampling and reporting.
- Street Paving Project - M-539, Northfield, Harding & Stratford Avenues; City of Oak Park, Michigan – Project Coordinator for geotechnical drilling, sampling and reporting.



- Newburgh Road Reconstruction between Glenwood and Michigan Avenue, City of Wayne, Michigan - Project Coordinator for geotechnical drilling, sampling and reporting.
- Pasadena Avenue Pavement Reconstruction, Mt Morris and Flint Township, Michigan - Project Coordinator for geotechnical drilling, sampling and reporting.
- Griswold Road Bridge over CSX Railroad, Northville Township, Michigan – Project Coordinator for bridge replacement structure with MSE wall supported abutments, included global stability and settlement analysis of MSE wall/bridge system.
- I-75 Bridge Replacements for Tetra Tech of Michigan –Project Coordinator for bridge replacements at Hess, King and Baker Roads
- Traffic Signal Design for MDOT-University Region – Project Coordinator for traffic signal foundation design for various sites in Monroe County
- US-23 ITS Design for HNTB Michigan - CCTV / MVD structure design
- I-75 Improvements for HNTB Michigan, Inc. –Project Coordinator for roadway improvements between I-271 and Dixie Highway
- East Stadium Boulevard for Northwest Consultants –Project Coordinator for East Stadium Boulevard MDOT Bridge Foundation & MSE Wall analysis & design for structure replacement over Ann Arbor Railroad and State Street
- DMS & CCTV at various locations for HNTB Corporation - Project Coordinator for geotechnical drilling, sampling and reporting
- Middlebelt Traffic Signals at Intersections of 5-, 6- and 7- Mile Roads for Spalding DeDecker Associates - Project Coordinator for geotechnical drilling, sampling and reporting
- Culvert Replacements, multiple locations - Rowe PSC - Project Coordinator for geotechnical drilling, sampling and reporting
- New Blake Transit Center, Ann Arbor Transit Authority, Ann Arbor, Michigan – DLZ Michigan, Inc. - Project Coordinator for geotechnical drilling, sampling and reporting
- I-75 Slope Repair, Toledo, Ohio – Hull & Associates - Project Coordinator for geotechnical drilling, sampling and reporting
- I-196 Culvert Crossing, Holland, Michigan – Alfred Benesch & Company - Project Coordinator for geotechnical drilling, sampling and reporting
- Ambassador Bridge Plaza, Detroit, Michigan – HNTB Corporation - Project Coordinator for geotechnical drilling, sampling and reporting
- I-96 Sign Replacement between I-275 & Newburgh Road, Livonia, Michigan – MDOT Contract Services - Project Coordinator for geotechnical drilling, sampling and reporting
- I-75 from Baldwin Avenue to M-15, Flint Township, Michigan – MDOT Contract Services - Project Coordinator for geotechnical drilling, sampling and reporting
- US 27 Interchange at M-57, Washington Township, Gratiot County, Michigan – Project Coordinator for new interchange including MDOT pile foundation analysis, embankment stability and settlement analysis.
- US-10 Interchange Project, Midland, Michigan – Project Coordinator for bridge replacement structure and construction of new entrance and exit ramps. Included MDOT roadway and pile foundation and global stability analysis.



Experience

Years with PSI: 1985-1992, 1999-present
Years experience with other firms: 7

Education

- Bachelor of Science in Geological Engineering, Michigan Technological University, 1985

Certifications/Registrations/Technical Training

- Professional Engineer, ID # 6201041761, Michigan, 1995
- Troxler Certified Nuclear Density Gauge Operator
- OSHA 29 CFR 1910.120 HAZWOPER, Worker

Professional Experience

Mr. Hestwood is a senior project engineer in the geotechnical services department of PSI's Farmington Hills, Michigan office. With more than 32 years of experience, he has an extensive background in geotechnical exploration and laboratory services and has provided services on projects ranging from major Wisconsin Department of Transportation (WDOT) and Michigan Department of Transportation (MDOT) transportation upgrades and underground mine structures to large and small footprint retail and commercial construction projects and cellular towers. In addition, Mr. Hestwood is responsible for technical review of geotechnical reports, supervision and training of support staff and project management.

Representative Project Experience

- I-75 Modernization - Project Manager/Subcontractor Coordinator for fast-track MDOT project
- MAASHTO-TPIMS - Project Manager for Truck Parking Information Management System signage at eight Rest Stops
- US-23 ATM Structures – Senior Project Engineer for the ATM Structures
- City of Dearborn, Michigan - Geotechnical Investigations - Project Manager for geotechnical drilling, sampling and reporting of various types of projects including: Water Main Replacement; Road Resurfacing; CSO Storm Sewer Replacement; Storm Sewer Separation; Asphalt Street Resurfacing; Pavement Cores & Soil Borings
- City of Troy - Project Manager for geotechnical drilling, sampling and reporting for Roadway Rehabilitation and Water Main Replacement projects
- City of Oak Park, Michigan – Project Manager for geotechnical drilling, sampling and reporting for Street Paving Projects
- City of Wayne, Michigan - Project Manager for geotechnical drilling, sampling and reporting for Road Reconstruction Projects
- City of Ann Arbor, Michigan - Project Manager for geotechnical drilling, sampling and reporting for Street Improvements
- Mt Morris and Flint Township, Michigan - Pasadena Avenue Pavement Reconstruction, - Project Manager for geotechnical drilling, sampling and reporting.
- Street Paving Project - M-539, Northfield, Harding & Stratford Avenues; City of Oak Park, Michigan – Project Manager for geotechnical drilling, sampling and reporting.
- Newburgh Road Reconstruction between Glenwood and Michigan Avenue, City of Wayne, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- Pasadena Avenue Pavement Reconstruction, Mt Morris and Flint Township, Michigan - Project Manager for geotechnical drilling, sampling and reporting.

- Griswold Road Bridge over CSX Railroad, Northville Township, Michigan – Project Engineer for bridge replacement structure with MSE wall supported abutments, included global stability and settlement analysis of MSE wall/bridge system.
- I-75 Bridge Replacements for Tetra Tech of Michigan – Senior Project Engineer for bridge replacements at Hess, King and Baker Roads
- Traffic Signal Design for MDOT-University Region – Project Manager for traffic signal foundation design for various sites in Monroe County
- US-23 ITS Design for HNTB Michigan - CCTV / MVD structure design
- I-75 Improvements for HNTB Michigan, Inc. – Senior Project Engineer for roadway improvements between I-271 and Dixie Highway
- East Stadium Boulevard for Northwest Consultants – Senior Project Engineer for East Stadium Boulevard MDOT Bridge Foundation & MSE Wall analysis & design for structure replacement over Ann Arbor Railroad and State Street
- DMS & CCTV at various locations for HNTB Corporation - Project Manager for geotechnical drilling, sampling and reporting
- Middlebelt Traffic Signals at Intersections of 5, 6 and 7 Mile Roads for Spalding DeDecker Associates - Project Manager for geotechnical drilling, sampling and reporting
- Culvert Replacements, multiple locations - Rowe PSC - Project Manager for geotechnical drilling, sampling and reporting
- New Blake Transit Center, Ann Arbor Transit Authority, Ann Arbor, Michigan – DLZ Michigan, Inc. - Project Manager for geotechnical drilling, sampling and reporting
- I-75 Slope Repair, Toledo, Ohio – Hull & Associates - Project Manager for geotechnical drilling, sampling and reporting
- I-196 Culvert Crossing, Holland, Michigan – Alfred Benesch & Company - Project Manager for geotechnical drilling, sampling and reporting
- Ambassador Bridge Plaza, Detroit, Michigan – HNTB Corporation - Project Manager for geotechnical drilling, sampling and reporting
- I-96 Sign Replacement between I-275 & Newburgh Road, Livonia, Michigan – MDOT Contract Services - Project Manager for geotechnical drilling, sampling and reporting
- I-75 from Baldwin Avenue to M-15, Flint Township, Michigan – MDOT Contract Services - Project Manager for geotechnical drilling, sampling and reporting
- US 27 Interchange at M-57, Washington Township, Gratiot County, Michigan – Project Engineer for new interchange including MDOT pile foundation analysis, embankment stability and settlement analysis.
- US-10 Interchange Project, Midland, Michigan – Project Engineer for bridge replacement structure and construction of new entrance and exit ramps. Included MDOT roadway and pile foundation and global stability analysis.

Representative Instrumentation Project Experience

- STH 29 Marsh Preload Instrumentation Installation; Marathon County, Wisconsin – Involved vibrating wire piezometer and settlement plate instrumentation across deep peat deposit.



Experience

Year Started with PSI: 2001
Years experience with other firms: 0

Education

- BS in Civil Engineering, Michigan State University, East Lansing, Michigan, 2001

Certifications/Registrations/Technical Training

- Professional Engineer, ID # 6201057718, Michigan, 2010
- Certified Troxler Nuclear Density Gauge Operator, PSI 1998 (refreshed 2011)
- SPT Analyzer Operator, GRL 2008
- Class A Inclinometer Operator, Slope Indicator, 2010

Affiliations/Memberships

- American Society of Civil Engineers (ASCE)

Professional Experience

Mr. Dubnicki is a senior project engineer in the geotechnical services department of PSI's Farmington Hills office. His responsibilities include providing technical reports, recommendations and designs for flexible and rigid pavement sections, deep and shallow foundations, utility tunneling, performing engineering classification and testing, drilling operations, Quality Assurance (QA), infiltration testing, soil resistivity testing, vibration monitor, vertical inclinometer and tiltmeter installation and instrumentation monitoring. Additionally, Mr. Dubnicki has provided service for two years in the construction quality control (QC) and testing services of PSI. His responsibilities have included foundation inspection for strip footings, caissons, rammed aggregate piers, steel pile installations, soils testing, and laboratory and field testing of grout, concrete, and asphalt. In addition to these, he has performed test pit, proofrolling, soil resistivity testing, and undercutting inspections for various jobs throughout Michigan.

Representative Project Experience – Municipal

- I-94 Industrial Corridor Redevelopment; Economic Development Corporation of Detroit - Project Manager for geotechnical drilling, sampling and reporting for Roadway Rehabilitation
- Flex-n-Gate Building; Nowak & Fraus - Project Manager for geotechnical drilling, sampling and reporting involving 29 soil borings and 22 test pits for 691,400 sf L-shaped warehouse facility
- City of Burton, Michigan - Project Manager for geotechnical drilling, sampling and reporting for Roadway Rehabilitation and Water Main Replacement projects
- City of Troy - Project Manager for geotechnical drilling, sampling and reporting for Roadway Rehabilitation and Water Main Replacement projects
- City of Dearborn, Michigan - Geotechnical Investigations - Project Manager for geotechnical drilling, sampling and reporting of various types of projects including: Water Main Replacement; Road Resurfacing; CSO Storm Sewer Replacement; Storm Sewer Separation; Asphalt Street Resurfacing; Pavement Cores & Soil Borings
- City of Wayne, Michigan - Project Manager for geotechnical drilling, sampling and reporting for Road Reconstruction Projects
- City of Ann Arbor, Michigan - Project Manager for geotechnical drilling, sampling and reporting for Street Improvements

Additional municipal project references available upon request.

Representative Project Experience – Transportation

- DMS & CCTV at various locations for HNTB Corporation - Project Manager for geotechnical drilling, sampling and reporting
- Middlebelt Traffic Signals at Intersections of 5, 6 and 7 Mile Roads for Spalding DeDecker Associates - Project Manager for geotechnical drilling, sampling and reporting
- Culvert Replacements, multiple locations - Rowe PSC - Project Manager for geotechnical drilling, sampling and reporting
- New Blake Transit Center, Ann Arbor Transit Authority, Ann Arbor, Michigan – DLZ Michigan, Inc. -Project Manager for geotechnical drilling, sampling and reporting
- I-75 Slope Repair, Toledo, Ohio – Hull & Associates - Project Manager for geotechnical drilling, sampling and reporting
- I-196 Culvert Crossing, Holland, Michigan – Alfred Benesch & Company - Project Manager for geotechnical drilling, sampling and reporting
- Ambassador Bridge Plaza, Detroit, Michigan – HNTB Corporation - Project Manager for geotechnical drilling, sampling and reporting
- I-96 Sign Replacement between I-275 & Newburgh Road, Livonia, Michigan – MDOT Contract Services - Project Manager for geotechnical drilling, sampling and reporting
- I-75 from Baldwin Avenue to M-15, Flint Township, Michigan – MDOT Contract Services - Project Manager for geotechnical drilling, sampling and reporting
- US 27 Interchange at M-57, Washington Township, Gratiot County, Michigan – Project Engineer for new interchange including MDOT pile foundation analysis, embankment stability and settlement analysis.
- US-10 Interchange Project, Midland, Michigan – Project Engineer for bridge replacement structure and construction of new entrance and exit ramps. Included MDOT roadway and pile foundation and global stability analysis.

Representative Instrumentation and Vibration Monitoring Project Experience

- Lansing Waste Water Treatment Plant; Lansing, Michigan – Project Manager responsible for preparing instrumentation monitoring plans and interpretation and reporting of daily/weekly engineering reports, supervising installation of Vertical Inclometers, Extensometers, Tell Tales and survey points prior to sheet pile installation, demolition and reconstruction activities to replace aging infrastructure.
- Bay City Water Treatment Plant; Bay City, Michigan– Project Manager responsible for preparing instrumentation monitoring plans and interpretation and reporting of daily/weekly engineering reports, supervising installation of Crack Monitors, Vibration Monitors, Tell Tales and survey points prior to construction activities for a new water treatment plant to service Bay County.
- NEORSD Southerly WWTC; Cuyahoga Heights, Ohio - Project Manager responsible for preparing instrumentation monitoring plans and interpretation and reporting of daily/weekly engineering reports, supervising installation of Vibration Monitors, Tiltmeters and Vertical Inclometers prior sheet pile installation, demolition of existing structures and construction of new FST Tanks.
- Soda Ash Settlement Basin (SASB) Monitoring; Amherstberg, Canada - Project Manager responsible for data interpretation and quarterly monitoring reports for 16 vibrating wire piezometers and 7 vertical inclinometers for a 30-foot MSE retaining wall for an existing SASB.



- Rock Quarry Blasting Monitoring; York, Pennsylvania – Project Manager for preparing a monitoring plan, set-up and review of blasting operations occurring at a nearby quarry for adjacent property owner. Included obtaining and reviewing previous blasting data, completing 5 weeks of on-site monitoring and providing a final report of findings and evaluations.
- Utility Installation (Blasting); Buffalo, New York – Project manager responsible for preparing instrumentation plan and monitoring an adjacent facility during rock blasting for underground utilities.
- Ambassador Bridge Gateway Project; Detroit, Michigan - Project manager responsible for preparing maturity meter location plan, data collection, evaluation and final reporting for documenting curing temperatures during multiple mass concrete pours on elevated bridge supports.
- Mass Concrete Footings for the Fort Street Bascule Bridge Replacement; Detroit, Michigan - Project manager responsible for preparing maturity meter location plan, data collection, evaluation and final reporting for documenting curing temperatures during multiple mass concrete pours for a bascule bridge foundation.
- Hospital Advanced Imaging Room; Youngstown, Ohio – Project manager responsible for preparing vibration monitoring plan, data and final report for documenting on-site baseline readings for a proposed imaging machine.
- Construction of New Dixboro Road Bridge; Ann Arbor, Michigan – Project manager in charge of installation, monitoring, data interpretation and report preparation for multiple locations performing vibration and vertical inclinometer monitoring of project activities during construction of a four-lane bridge and pedestrian walkway over the Huron River. In addition, vibration monitoring was completed on the nearby Dixboro Road Dam.
- Downtown Main Street Remove and Replace; City of Hillsdale, Michigan – Staff Engineer in charge of vibration monitoring of downtown building structures and historical buildings.
- Broadway Street Bridge, Argo Electrical Substation; Ann Arbor, Michigan – Staff engineer responsible for monitoring ground vibrations during demolition, sheet pile, and steel pile placement during bridge construction for substation and other historical buildings in the near vicinity.
- Grand River Bridge Reconstruction; Detroit, Michigan – Staff engineer responsible for monitoring and reporting ground vibrations during demolition of bridge. Monitoring was completed on a high voltage DTE transmission line running through the roadway median.
- Pfizer Building 651; Kalamazoo, Michigan – Staff engineer responsible for monitoring and recording vibrations during vibro-compaction efforts near sensitive buildings and working laboratories.
- DWSD Facility; City of Troy, Michigan - Vibration monitoring during demolition, excavation and construction activities on existing 30" and 96" water mains, retaining walls, existing relay station within a Detroit Water and Sewer Department (DWSD) facility. Instrumentation included Tell-tales, vertical inclinometers and survey points monitoring critical structures within the facility.
- DWSD Facility; Imlay City, Michigan - Vibration monitoring during demolition, excavation and construction activities on existing 96" water main and retaining walls within a Detroit Water and Sewer Department (DWSD) facility. Instrumentation included Tell-tales, vertical inclinometers and survey points monitoring critical structures within the facility.
- DWSD Facility; City of Livonia, Michigan - Monitoring during demolition, excavation and construction activities during new vault construction for existing 30" sampling line, retaining wall installation and safety and existing water reservoir within a Detroit Water and Sewer Department (DWSD) facility. Instrumentation included vertical inclinometers and vibration monitoring of critical structures within the



facility.

- University of Michigan (UofM) Cardio Vascular Center; Ann Arbor, Michigan - Vertical inclinometer monitoring of a 4-story retaining wall during construction of U of M Hospital's new cardio vascular center addition.
- Building 616 – Great Lakes Naval Academy; Great Lakes, Illinois - Monitoring construction activities during critical retaining wall installation for slope failure along an existing 4 story building located on bluff. Project responsibilities included vibration monitoring long term vertical inclinometer monitoring.
- Cleveland Water and Sewer Department (CWSD); City of Cleveland, Ohio - Monitoring of existing Water Treatment Facility during demolition of a former 2 story chemical mixing facility for the Cleveland Water and Sewer Department (CWSD), City of Cleveland, Ohio. Project included installation of vertical inclinometers, vibration monitors and tiltmeters to monitor critical nearby structures.
- Data Bank Center; Dallas, Texas – Monitoring vibrations during drilling, demolition and construction activities for large data center complex.
- Michigan State University; East Lansing, Michigan – Vibration monitoring during temporary sheet pile installation for new underground steam lines nearby multistory historical buildings located on university campus.

Representative Project Experience – Education

- Wyandotte Public School District, Project Manager for geotechnical investigations for various school building additions, parking lot renovations, athletic field bleacher reports for geotechnical drilling, sampling and reporting.
- City of Troy Schools, various schools in the district, City of Troy, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- Dexter Community Schools, various schools in the district, Dexter Township, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- Pioneer High School building additions, field house and artificial turf field, Ann Arbor, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- GG Brown Renovation Project, University of Michigan, Ann Arbor, Michigan – University of Michigan - Project Manager for geotechnical drilling, sampling and reporting for proposed crane pad
- Additional education project references available upon request.

Representative Project Experience – Industrial / Manufacturing

- General Motors V6 Engine Plant, Flint, Michigan – Project Manager for new machine foundations including deep and shallow foundation systems.
- Great Lakes Crossing Parking Lot Improvements, City of Auburn Hills, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- Toyota Technical Center, York Township, Michigan - Project Manager for construction inspection and testing services.
- Baby Creek CSO Facility, Dearborn, Michigan - Project Engineer for construction inspection and testing services.
- Ford Motor Company, Dearborn, Michigan - Project Engineer for construction inspection and testing services.



- Walbridge Aldinger Company; Ford Heritage 2000 Project, Dearborn, Michigan-Project Manager for construction testing services for 1.2 million square-foot assembly plant and a 800,000 body shop for Ford Motor Company Rouge complex.
- Kemp Building Addition, City of Troy, Michigan - Project Manager for geotechnical drilling, sampling and reporting.
- GM Truck Assembly Plant, Fort Wayne, Indiana – General Motors Corporation - Project Manager for geotechnical drilling, sampling and reporting
- McLaren Performance Technologies, Livonia, Michigan – Nowak & Fraus - Project Manager for geotechnical drilling, sampling and reporting
- Sled Lab Machine Foundation, Plymouth, Michigan – Johnson Controls - Project Manager for geotechnical drilling, sampling and reporting
- EMC Chamber Addition for Ford Motor Company, Allen Park, Michigan – Giffels LLC / IBI Group - Project Manager for geotechnical drilling, sampling and reporting
- General Tire Plant Expansion; Mount Vernon, Illinois – Project Engineer for drilled caisson and spread footing foundations supported on lime stabilized clay fill with cast-on-site tilt up concrete walls
- Great Lakes Pulp & Fibre Deinking Facility; Menominee, Michigan – Auger-cast pile load testing and production pile installation monitoring
- General Motors G.M.T. 800 Plant Expansion; Janesville, Wisconsin – Geotechnical exploration involving auger-cast and driven pipe pile foundation systems

Representative Construction Inspection and Testing Project Experience

- Dean Road, Ypsilanti, Michigan – Engineer responsible for recommendations for subgrade instability for roadway and underground utility installation.
- White Construction Inc., Carson City, Michigan – Senior technician working with site engineers and staff while in charge of multiple technicians for roadway construction, subgrade, concrete, soils, and grout testing for multiple generators and structures for a newly constructed power plant.
- EMJ Inc., Meridian Mall; Okemos, Michigan – Senior technician responsible for inspection and testing of roadway subgrades, asphalt placement, concrete, foundation inspection, undercuts, and compaction testing for remodeling and new construction to the existing mall that included 3 new building sites and 14 parking lots.
- Michigan State University; East Lansing, Michigan – Primary technician responsible for multiple projects including stadium improvements and structural supports, new research facilities, classrooms, roadway construction, pavement and concrete testing, building foundation, and pad inspections.
- Meijer's; Various Sites, Michigan – Providing inspections and testing of foundations, road construction, concrete, asphalt, and underground utilities.
- Granger Construction, Charlotte Public School System; Charlotte, Michigan – Technician responsible for providing testing and construction recommendations to work crews involved in the upgrade and construction of public school system facilities.
- Art Van; Lansing, Michigan – Responsible for providing construction testing services on concrete, asphalt, and soils testing.
- Tetra Tech, MPS; Howell, Michigan – Senior Technician responsible for five miles of new sanitary sewer lines at multiple project locations.
- City of East Lansing, Abbot Road; Michigan – Performed asphalt testing.



- City of Jackson; Michigan – Performed asphalt testing.
- The Wieland-Davco, Trinity Church; Lansing, Michigan
- All-Terrain; Ingham County, Michigan – Performed residential inspections at various sites.
- Thatcher Construction; East Lansing, Michigan – Water park
- Ingham County Parks; Lansing, Michigan
- Ingham County Drain Commission; Ingham County, Michigan – Performed soils testing at multiple sites.



Experience

Year started with Intertek-PSI: 2006
Years experience with other firms: 2

Education

- Associates in Applied Science in Concrete Technology, Alpena Community College, 2005

Certifications/Registrations/Technical Training

- MCA/ACI Concrete Strength Technician
- MCA/ACI Certified Aggregate Technician
- Michigan Bituminous QA/QC Certified Technician
- PSI -Certified Nuclear Density Gauge Operator
- ACI/MCA Concrete Field Testing Technician - Level I

Professional Experience

Mr. Lindsay is a Laboratory Technician in the Construction Service Materials Testing Department of PSI's Farmington Hills. With over 14 years of experience, Mr. Lindsay has an extensive background in field inspections and testing of construction materials in the laboratory including but not limited to concrete and masonry compressive strength evaluation, sieve analysis, standard and modified proctor testing and bituminous concrete (asphalt) extraction and gradations.

Representative Project Experience

- Jumbo Coater, Ash Township – Lead Laboratory Technician for all concrete compressive strength testing, sieve analysis and modified proctors.
- 2017 – On-Going City of Dearborn, Michigan (Multiple Projects) – Lead Laboratory Technician for all concrete compressive strength testing, sieve analysis, modified proctors, and asphalt extraction/gradation analysis.
- Northwest Service Dr, Southfield – Lead Laboratory Technician for all concrete compressive strength testing, sieve analysis and modified proctors and asphalt extraction/gradation analysis
- PAL Headquarters, Detroit – Lead Laboratory Technician for all concrete compressive strength testing, sieve analysis and modified proctors
- U of M Health Center, Brighton – Lead Laboratory Technician for all concrete compressive strength testing, sieve analysis and modified proctors



Experience

Year Started with PSI: 2013
Years of Experience with Other Firms: 10+

Education

- MS in Civil Engineering, Lawrence Technological University, Southfield, MI 2009
- BS in Civil Engineering, University of Salahaddin, IRAQ, 1984

Certifications/Registrations/Technical Training

- NICET – Level 1 In Geotechnical Engineering Technology - 2015
- TEL (Troxler Electronic Laboratories, Inc). North Carolina -USA. Summer 2000
- Basics and applications of Solid Modeling using (I-DEAS) Software, Henry Ford Community College, Dearborn, MI Spring, 2000

Affiliations/Memberships

- ESD, Engineering Society of Detroit
- AAAEA, Arab American Architects and Engineers Association

Professional Experience

Mrs. Mansour sets up and performs laboratory tests following detailed instructions and procedures for PSI's local Plymouth, Michigan office as well as other PSI offices in the State of Michigan. Mrs. Mansour makes detailed observations of soil conditions, documents testing data and results and gives limited interpretation of results. Mrs. Mansour is also responsible for overseeing laboratory work performed by other laboratory personnel and is responsible for the maintenance of the laboratory equipment/supplies. Mrs. Mansour is qualified to perform the following tests: Soil Sampling, Transportation and Preparation, Moisture Content, Organic Content, Unit Weight, Unconfined Compression, Atterberg Limits, Sieve Analysis (Mechanical & Full), Loss by Wash (P-200), Standard Proctor ASTM D698, Modified Proctor D1557, California Bearing Ratio (CBR), Permeability – Constant and Falling Head, Specific Gravity, Consolidation, Resistivity.

Representative Project Experience

- Lake Huron Water Initiative; Saginaw, Michigan – Laboratory Supervisor
- Colerain Compressor Station; Colerain, OH - Laboratory Supervisor
- Bay City Waste Water Treatment Plant; Bay City, Michigan - Laboratory Supervisor
- Menard Home Improvement Store; Belleville, Michigan - Laboratory Supervisor

Other Professional Experience

- **TES Consultant; Farmington Hills, MI**
 - GM Parking Deck; Warren, Michigan- field staff Civil Engineer and supervisor of laboratory operations and testing
 - Father Solano's Casey Center; Detroit, Michigan- field staff Civil Engineer and supervisor of laboratory operations and testing
 - Main Street Parking Structure; Ann Arbor, Michigan - field staff Civil Engineer and supervisor of laboratory operations and testing
- **Directorate of Roads and Bridges; Erbil, IRAQ**

Mrs. Mansour was involved in all the details and phases necessary to build roads from subgrade to pavement, road markings and maintenance of roads- Project Engineer

Experience

Year started with Intertek-PSI: 2017
Years' experience within industry: 26

Education

BS in Civil Engineering, Michigan Technological University, 1991
Construction and Construction Management Minor

Certifications/Registrations/Technical Training

- MDEQ Certified Soil Erosion and Sedimentation Control Inspector
- Michigan Certified Aggregate Technician

Affiliations/Memberships

- American Concrete Institute (ACI)
- Michigan Concrete Association (MCA)
- American Public Works Association (APWA)
- National Rural Water Association (NRWA)
- American Water Works Association (AWWA)
- American Society of Civil Engineers (ASCE)
- National Society of Professional Engineers (NSPE)
- The Engineering Society of Detroit (ESD)

Professional Experience

Mr. Stanley is a Civil Project Engineer with more than 25 years of experience in engineering. He served municipalities throughout the state of Wisconsin as a staff engineer and then Assistant City Engineer. Most recently Mr. Stanley was the Construction Materials Engineer and Quality Control Supervisor for the Edw. C. Levy Company in Detroit where he oversaw quality control technicians provide aggregate testing services. Prior to that, Mr. Stanley was a design engineer with the Road Commission for Oakland County, designing Federal Aid Urban funded transportation projects as well as the Plat Engineer for the RCOC, approving all new public road construction. Mr. Stanley has a broad range of public works and civil engineering design and construction experience.

Representative Project Experience

- Project Engineer for Annual Sewerage Lift Station Rehabilitation Program, City of Cedarburg, WI
- Project Engineer for Special Assessment Districts for Annual Road Improvement and Sidewalk Program, City of Cedarburg, WI
- Directed Non-Point Source Pollution Abatement Program, City of Mequon, WI
- Administered Stormwater Management Program including review and approval of development plans, SWPPP's, Outfall Monitoring, and Public Information and Education, City of Mequon, WI
- Administered the Private-to-Public Road Transfer process in accordance with Public Act 336, Road Commission for Oakland County.
- Administered the Public Road Abandonment process in accordance with Public Act 283, Road Commission for Oakland County.
- Administered Design Review and Construction of all new public road subdivision project under the jurisdiction of Road Commission for Oakland County.



Attachment II

Project Examples

Client/Owner: City of Dearborn
16901 Michigan Avenue, Suite 12
Contact: Ed Sajewski
Email: esajewsk@ci.dearborn.mi.us
Phone: (734) 943-2375

Project Location: Dearborn, Michigan

Property Type: Roadway, Sidewalk and Sewer Improvements

Performance Period: 2008 – On-Going

Project Value: PSI Fees ~\$450,000

PSI Project Personnel: Mahmoud El-Gamal, PhD, PE – Project Director
Arif Cekic, PhD, PE – Geotechnical Services Manager
Scott Stanley - Construction Services Project Engineer

Services Provided: Geotechnical Subsurface Investigation
Construction Materials Testing and Observation

Project Description: As-Needed Services for Reconstruction and Rehabilitation of Streets;
Sidewalks; Storm and Sanitary Sewer Replacement; and Water Main Replacement

PSI Scope of Work: Geotechnical Services: Soil Borings, Engineering Recommendations;
Construction Services: Petrographic Analysis; Density Testing; Asphalt & Concrete Materials
Testing



Client: City of Ann Arbor
301 East Huron Street
P.O. Box 8647
Ann Arbor, Michigan 48107
Contact: David Dykman
Email: ddykman@a2gov.org
Phone: 734.794.6410 Ext: 43685

Owner: City of Ann Arbor

Project Location: Ann Arbor, Michigan

Property Type: Roadway & Sewer Improvements

Performance Period: 2008 - On-Going, Annual Contracts

Project Value: Approximately \$130 Million (PSI Fees ~\$900,000)

Key Project Personnel: Mahmoud El-Gamal, PhD, PE - Project Director
Arif Cekic, PhD, PE - Geotechnical Project Manager
Scott Stanley - Construction Services Engineer

Services Provided: Geotechnical Services; Construction Materials Testing & Observation

Project Description: As-Needed Services for Reconstruction and Rehabilitation of Roadways and Streets; Storm and Sanitary Sewer Replacement and Water Main Replacement at various locations throughout the City.

PSI Scope of Work: Geotechnical Subsurface Investigation, Soil Borings; Petrographic Analysis;
Construction Services: In-Place Soil Density Testing; Asphalt & Concrete Materials Testing



Client: Charles E. Raines Company
17700 Fort Street
4500 Maple Avenue, 3rd Floor
Riverview, Michigan 48193
Contact: Bill Bettendorf
Email: bbettendorf@charlesraines.com
Phone: 313-285-7510

Owner: Cities of Flat Rock, Melvindale, Riverview, Allen Park and Gibraltar, Michigan

Project Location: City of Flat Rock, Melvindale, Riverview, Allen Park and Gibraltar, Michigan

Property Type: Roadway & Sewer Improvements

Performance Period: 2015 – On-Going

Project Value: Project Total: ~\$12 Million; PSI Fees ~\$150,000

Key Project Personnel: Mahmoud El-Gamal, PhD, PE – Project Director
Scott Stanely – Project Engineer

Services Provided: Construction Materials Testing and Observation Services

Project Description: As-Needed Roadway & Sewer Improvements - Reconstruction and Rehabilitation of Roadways and Streets; Storm and Sanitary Sewer Replacement and Water Main Replacement at various locations throughout the Downriver communities of Flat Rock, Melvindale, Riverview, Allen Park and Gibraltar

PSI scope of work: In-Place Soil Density Testing; Asphalt & Concrete Testing



Client/Owner:	Detroit Economic Growth Corporation 16901 Michigan Avenue, Suite 12 Contact: Cleveland Dailey Email: cdailey@degc.org Phone: 313-963-2490
Project Location:	Detroit, Michigan
Property Type:	I94 Industrial Corridor Redevelopment - Geotechnical Investigation for future Roadway, Sidewalk and Vertical Infrastructure Improvements
Performance Period:	20014 - 2016
Project Value:	PSI Fees ~\$219,420
PSI Project Personnel:	Mahmoud El-Gamal, PhD, PE – Project Director Arif Cekic, PhD, PE – Geotechnical Services Manager
Services Provided:	Geotechnical Subsurface Investigation
Project Description:	PSI's field exploration program consisted of multiple soil borings in six (6) designated areas along the I-94 corridor. The borings were performed to a depth of approximately 25 feet below the existing ground surface. The investigation was to provide information on the soil's suitability for support of foundations, floor slabs and pavements for future development in the areas. Selected soil samples were tested to determine contaminants and soil properties for PSI's engineering evaluation. Laboratory testing on the soil samples obtained during the field exploration included natural moisture content, organic content, unit weight, unconfined compression and estimating the unconfined compressive strength of the cohesive soils encountered using a calibrated hand penetrometer.



Subsequent Private Development Projects in I-94 Corridor Redevelopment area involving PSI services:

- Flex-N-Gate Warehouse Facility; Client: Roncelli, Inc.; Geotechnical & Construction Services: ~ \$124,600
- I-94 Industrial Park; Client: Detroit Building Authority; Environmental Services: ~ \$53,800

HIGHWAY/ROADWAY EXPERIENCE

Representative Municipal Experience

City of Dearborn

- Reconstruction and Rehabilitation of Roadways and Streets (2008 – On-going)
Dearborn, Wayne County
Rehabilitation of City and Residential Roadway Pavements; Geotechnical and Construction Materials Testing

City of Novi

- Fox Run Village (2015)
Novi, Oakland County
Redwood-ERC Novi LLC
Construction Materials Testing for Residential Roadway Pavements

City of Ann Arbor

- Miscellaneous Roadway Projects (2010 - On-going)
- S Main Street (2017)
- MDOT - Stone School Road (2017)
- Springwaters Subdivision Ph II (2016)
Ann Arbor, Washtenaw County
Geotechnical Services and Construction Materials Testing & Inspection

Representative MDOT Roadway Experience

Michigan Department of Transportation -

- On-going As-Needed projects for MDOT Regions: Metro, University, Grand, Bay, North, Southwest
- I-96 (2018)
- Intersection of Outer Drive & Allen Road - Melvindale (2018)
- I-75 Modernization M-102 to M-59 (2017)
- I-94 Outer Drive to Miller Rd (2017)
- US-23 Livingston & Washtenaw Counties (2017)
- I-75 Bridges (2016)
- Old M-14 - Ann Arbor Trail (2016)

Various locations in Michigan

Michigan Department of Transportation

Geotechnical Services; Construction Materials Testing & Inspection

Various Contractor MDOT Projects

- Outer Dr/West Allen Road to Toledo - *Santos Cement* (2018)
- Long Lake & Telegraph - *Santos Cement* (2018)
- Northwestern - *Santos Cement* (2018)
- Outer Dr/Allen Road, Melvindale - *Santos Cement* (2018)
- Meadowbrook Drive - *T & D Construction* (2017)
- Cherry Hill/Haggerty - *Lakeshore Engineering Group* (2017)
- Brighton Road - *F & M Concrete Construction* (2017)
- Maple & Michigan Ave - *D Macro Contractors* (2017)
- Orchard Lake Road - *Dan's Excavating* (2017)
- M-52 Bent Oak - *T & D Construction* (2017)
- US-23 Livingston & Washtenaw - *Diane Dukes* (2017)
- Various Washtenaw County Roads - *Nashville Construction* (2016)
- Oakvalley Drive - *Rauhorn Electric* (2016)

Various locations in Michigan

Contractors noted with Project

Geotechnical Services; Construction Materials Testing & Inspection

Representative County Projects

Genesee County Road Commission

- Irish Road Reconstruction
- Traffic Signal Upgrade - Clio at Dodge; Genesee at Mt Morris
- Traffic Signal Upgrade Mast Arm - Pasadena at Jennings
- Beecher & Calkins - Slip Ramp
- Braemore Subdivision Road Reconstruction
Genesee County, Michigan
Pavement Design with Subgrade Stabilization Recommendations; Bridge Foundation Recommendations; MDOT Spread Footings and Stability Analysis

St Clair County Road Commission

- Fisher Road over Black River (2018)
- St Clair Highway Bridge over Belle River (2017)
- Frith Road Bridge over Holland Drain (2017)
- Marine City Highway Bridge over Beaubien Creek (2017)
- Wales Center Road Bridge over Pine River (2016)
- Meskill Rd Bridge (E & W) over Tinsman Drain (2016)
- Gratiot Rd Bridge over Rattle Run Creek (2016)

St Clair County, Michigan

Geotechnical Services may include: Exploration for Bridge Replacement Structures, MDOT Spread Footings and Stability Analysis

Lapeer County Road Commission

- Lake Pleasant & Clear Lake - Shoulder Aggregate Evaluation (2017)
- Coldwater & German Roads - Flexible Pavement Design (2017)

Lapeer County, Michigan

Flexible Pavement Design with Subgrade Stabilization Recommendations in Peat and Loose Sand Fill with Undercuts, Geotextiles and Light-weight materials

Representative Bridge Experience

Delaware-Morehead Bridge (2017)

Wayne County

Stantec Consulting

Construction Materials Testing & Observation

Single Span Bridge over Little Lake Creek @ US-24 (2017)

Wayne County

Fishbeck, Thompson, Carr & Huber (FTCH)

Geotechnical Services

I-75 11 Bridges (2016)

Wayne County

Alfred Benesch & Company

Geotechnical Services

Island Park Pedestrian Bridge (2015)

Wayne County

Oak Construction Corporation

Construction Materials Testing & Observation

Representative Traffic Signal Projects

Traffic Upgrade (2018)

East Lansing, Ingham County

Tetra Tech

Geotechnical Services

Traffic Signals - Allen Road & W Outer Drive (2017)

Allen Park, Wayne County

Hubbell, Roth & Clark

Geotechnical Services

Traffic Signals 1426 Walnut - MDOT 63400-124724 (2017)

Wayne County

Dan's Excavating

Construction Materials Testing & Observation

SEWER & WATER MAIN EXPERIENCE

Representative Municipal Projects

City of Dearborn (2008 - On-going)

- Storm and Sanitary Sewer Replacements
- Water Main Replacements

Dearborn, Wayne County

Geotechnical Services; Construction Materials Testing & Observation

City of Ann Arbor

- Various Water Mains (2015 - On-going)

Ann Arbor, Washtenaw County

City of Ann Arbor

Construction Materials Testing & Observation

City of Troy

- Roundtree Water Main Relocation (2018)
- Wattles Road Water Main (2016)

City of Troy, Oakland County

City of Troy

Geotechnical Services

Charter Township of Canton

- Water Main Replacement (2016)
Canton Township, Wayne County
Charter Township of Canton
Site Development
Spalding DeDecker Associates
Geotechnical Services

City of Burton

- Water Main - DWRP Section 5 (2017)
- Water Main - DWRP Section 4 (2016)
- Water Main - Flint Customers (2016)
Burton, Genesee County
Stantec Consulting
Geotechnical Services

Grosse Ile Township

- West River Road Water Main (2017)
Grosse Ile Township, Wayne County
CE Raines & Company
Geotechnical Services

Jackson

- Jackson Water Main (2017)
Jackson, Michigan
Northwest Consultants, Inc.
Geotechnical Services

Ypsilanti

- ACM Water Main (2018)
Ypsilanti, Washtenaw County
Angelo Iafrate Construction Company
Geotechnical Services

Representative Pump Station Projects

WWS Sanitary Sewer Pump Station Relocation - Farrand Road (2017)

Vienna Township, Genesee County
Genesee County Drain Commission
Geotechnical Services

GLWA-CS-1738 Orion & Newburgh Pump Station Improvements (2017)

Newburgh Village, Wayne County
Alfred Benesch & Company
Geotechnical Services

Representative Water/Wastewater Treatment Plants

Ann Arbor Water/Wastewater Treatment Plant (2009-2017)

Various projects for AAWWTP Facilities Renovations
Ann Arbor, Washtenaw County
Walsh Construction
Sorenson Gross Construction
DeCal, Inc.

Geotechnical Services, Vibration Monitoring
Construction Materials Testing & Observation
including GPR

GLWA Springwells Water Treatment Plant (2014-2018)

Dearborn, Michigan
Walsh Construction
Construction Materials Testing & Observation

Representative Trail/Pathway Projects

Trail along Cherry Hill (2016)

Non-motorized trail located in Canton Township
Canton, Wayne County
Spalding DeDecker Associates
Geotechnical Services

Mid-Michigan Community Pathway (2016)

Non-Motorized Pathway along US 127, including
global stability of sloped paving cut below overpass
structures and modular block retaining walls
Emerson Township, Gratiot County
ROWE Professional Services and MDOT
Geotechnical Services



ENVIRONMENTAL CONSULTING
GEOTECHNICAL ENGINEERING
CONSTRUCTION MATERIALS TESTING & ENGINEERING
INDUSTRIAL HYGIENE SERVICES
NONDESTRUCTIVE EXAMINATION
BUILDING SCIENCE SOLUTIONS
PAVEMENT EVALUATION SERVICES
SPECIALTY ENGINEERING & TESTING SERVICES

intertek.com/building
psiusa.com

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Fee Proposal



REQUEST FOR PROPOSAL TO PROVIDE

CITY OF NOVI, MICHIGAN

**GEOTECHNICAL ENGINEERING
CONSULTANT SERVICES FOR PUBLIC
PROJECTS**

2018-2023



Submitted to

THE CITY OF NOVI, MICHIGAN

November 2018

Professional Service Industries, Inc. (PSI)

FIRM NAME: _____

ATTACHMENT 'A' GEOTECHNICAL ENGINEERING FEES

COST OF CONSTRUCTION (ESTIMATED) From To		ROAD RECONSTRUCTION		ROAD RECLAMATION		ROAD REHABILITATION		NON-MOTORIZED (SIDEWALKS, PATHWAYS & TRAILS)	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 200,001	\$ 300,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 300,001	\$ 400,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	3.0
\$ 400,001	\$ 500,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 500,001	\$ 750,000	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
\$ 750,001	\$ 1,000,000	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
\$ 1,000,001	\$ 2,000,000	1.0	1.9	1.0	1.9	1.0	1.9	1.0	1.9
\$ 2,000,001	and greater	0.9	1.9	0.9	1.9	0.9	1.9	0.9	1.9

2.0
SMA's

COST OF CONSTRUCTION (ESTIMATED) From To		WATER MAIN CONSTRUCTION		SANITARY/STORM SEWER CONSTRUCTION		UNDERGROUND UTILITY REHABILITATION		TRAFFIC SIGNALS	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 200,001	\$ 300,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 300,001	\$ 400,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 400,001	\$ 500,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 500,001	\$ 750,000	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
\$ 750,001	\$ 1,000,000	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
\$ 1,000,001	\$ 2,000,000	1.0	1.9	1.0	1.9	1.0	1.9	1.0	1.9
\$ 2,000,001	and greater	0.9	1.9	0.9	1.9	0.9	1.9	0.9	1.9

- Notes:**
- Design fees are determined by multiplying the construction cost estimate by the % fee shown in the above tables.
 - Construction fees are determined by multiplying the contractor's bid by the % fee shown in the above tables.
 - See the Request for Proposals and Request for Qualifications regarding the specific scope of services included under each fee and for any exclusions (i.e. work performed by City staff as part of the project).
 - All percentages or fees shall be considered 'all-inclusive'.
 - Not all projects will require initial geotechnical design and/or construction material testing.



SCHEDULE OF GEOTECHNICAL SERVICES & FEES

ENGINEERING AND TECHNICAL SERVICES

Principal Consultant (hour).....	\$ 185.00
Senior Project Manager (hour).....	\$ 155.00
Project Engineer (hour).....	\$ 135.00
Staff Engineer (hour).....	\$ 110.00
Engineering Technician (hour).....	\$ 75.00
Secretarial Services (hour).....	\$ 58.00
Vehicle (mile).....	\$ 0.95

DRILLING AND SAMPLING

Mobilization and Demobilization of an ATV Mounted Drill Rig (upcharge).....	\$ 850.00
Drilling (<i>Including split spoon sampling at standard intervals and N-Value lower than 50 blows per foot</i>) and Sampling (including a truck mounted drilling with crew of 2 drillers) (per day).....	\$3,200.00
Additional Split-Spoon Sampling (each).....	\$ 12.80
Shelby Tube Sample (each).....	\$ 85.00
Grouting Boreholes (hour).....	\$ 220.00
Plus (foot).....	\$ 6.80
Coring Through Concrete (inch).....	\$ 30.50
Coring Through Asphalt (inch).....	\$ 16.50
Rock Coring – 0 – 50' (foot).....	\$ 69.50
Setup for Rock Coring (minimum setup \$400.00 per day) (hole).....	\$ 450.00
Drill Rig Hourly Rate.....	\$ 250.00
Traffic Control (per project basis).....	\$ TBD
Flagger (crew of 2) (per day).....	\$1,000.00
Use of special equipment or permit for moving rig on site/clearing access – cost plus 20%.	
Services and fees not listed above, such as installation of groundwater monitoring wells, will be quoted upon request.	

LABORATORY TESTING

Atterberg Limits Determination – one point method – each.....	\$ 98.00
Atterberg Limits Determination – three point method – each.....	\$ 180.00
Calibrated Penetrometer Test – each.....	\$ 8.50
California Bearing Ratio Test – each.....	\$ 730.00
Density Determination – each.....	\$ 42.00
Hydrometer Analysis – each.....	\$ 275.00
Moisture Content – each.....	\$ 8.50
Organic Content – each.....	\$ 85.00
Proctor – Standard – each.....	\$ 205.00
Proctor – Modified – each.....	\$ 255.00
Sieve Analysis – each.....	\$ 160.00
Loss by Wash – Percent passing #200 sieve – each.....	\$ 42.00
Soil Resistivity – Lab Testing – each.....	\$ 210.00
Soil Resistivity – Field Testing – each.....	\$ 715.00
Specific Gravity Determination – each.....	\$ 195.00
Unconfined Compression – SPT Soil Sample – (with curve) – each.....	\$ 95.00
Unconfined Compression – SPT Soil Sample – (without curve) – each.....	\$ 42.00
Visual Engineering Classification – each.....	\$ 7.60

Rates for advanced laboratory testing will be quoted upon request.

REMARKS

Services and fees not listed above will be quoted upon request.
Per Diem and transportation charges will be added if applicable.



SCHEDULE OF CONSTRUCTION MATERIALS TESTING SERVICES & FEES

Intertek-PSI

2018 Schedule of Services and Fees**

FIELD TESTING SERVICES

	<u>Unit</u>	<u>Rate</u>
<u>Concrete / Soils Engineering Technician</u>		
Concrete Field Testing (ACI or INDOT Level I Technician) Slump, Temperatures, Air Content, Unit Weight and Yield Molding of Concrete Cylinders or Flexural Strength Beams Field Compaction Testing of Soil or Aggregate Fill or Backfill Pick up Concrete/Soil Samples	Hour	\$50.00
<u>Senior Soil Technician</u>		
Senior Soil Technician to Evaluate and Manage Excavation and Grading Projects Deep or Shallow Foundation Inspections Undercutting or Over-excavation Monitoring Proofrolling or Site Clearing Verification Fill Placement Control	Hour	\$55.00
<u>Senior Concrete Technician</u>		
Concrete Batch Plant Inspection Placement and/or Curing Verification Reinforcement Steel Placement Inspection Post-tension Inspection	Hour	\$55.00
<u>Senior Hot-Mix-Asphalt Technician</u>		
Perform Test Strips Obtain Plate Samples Density Control	Hour	\$55.00
<u>Structural Steel Technician</u>		
Visual Weld Inspection, Bolt Tension Verification, Shear Stud Verification Fireproofing Inspection	Hour	\$95.00
AWS Certified Welding Inspector or Level II NDE Technician	Hour	\$120.00
<u>Specialist</u>		
FF/FL Measurements using Floor Pro® FAA Hot-Mix Asphalt Verification Testing INDOT Certified Hot-Mix Asphalt or INDOT QA/QC Certified Concrete Technician Concrete Maturity Meter Analysis (C-1074) Nondestructive Testing of Concrete Using Windsor Probe or Swiss Hammer Auger Cast or Driven Pile Monitoring Moisture Vapor Transmission Testing	Hour	\$110.00
<u>Concrete/Asphalt Core Drilling</u>		
Regular Time	Hour	\$110.00
Overtime	Hour	\$165.00
Core Barrel Ware Charge	Per Inch	\$6.00

**** Escalation on future years CS fees and rates at 3%**

SCHEDULE OF CONSTRUCTION MATERIALS TESTING SERVICES & FEES

2018 Schedule of Services and Fees**

ENGINEERING SERVICES

Engineering

	Unit	Rate
Engineering Services for Contract Administration, Scheduling, Test Evaluation, Report Review	Hour	\$120.00
Senior Project Manager/Engineer	Hour	\$160.00
Project Manager/Engineer	Hour	\$130.00
Staff Engineer	Hour	\$100.00

EQUIPMENT

Nuclear Density Gauge	Day	\$55.00
Dynamic Cone Penetrometer	Day	\$45.00
Electronic Field Scales	Day	\$45.00
Concrete Air Meter	Day	\$45.00
Core Drill	Day	\$130.00
Generator	Day	\$80.00
Windsor Probe System	Day	\$90.00
Windsor Probe Shot	Day	\$20.00
Schmidt Hammer	Day	\$105.00
Floor Pro® for FF/FL Testing	Day	\$180.00
Sand Cone Density Kit	Day	\$80.00
NDE Ultrasonic Scope	Day	\$1155.00
Magnetic Particle Equipment	Day	\$90.00
Dye Penetrant Equipment	Day	\$90.00
Skidmore/Wilhelm Bolt Tension Calibrator	Day	\$130.00
Torque Wrench	Day	\$80.00
Anchor Bolt Load Test Equipment	Day	\$180.00
R-Meter Rebar Locator	Day	\$130.00

LABORATORY SERVICES

Aggregate Testing

Sieve Analysis (C-136)	Each	\$120.00
Percent Fines (C-117)	Each	\$105.00
Los Angeles Abrasion (C-131)	Each	\$405.00
Flat and Elongated Pieces (D-4791)	Each	\$185.00
Sand Equivalent (D-2419)	Each	\$130.00
Lightweight Pieces in Aggregate (C-123)	Each	\$255.00
Sodium or Magnesium Sulfate Soundness (C-88)	Each	\$360.00
Specific Gravity and Absorption of Coarse Aggregate (C-127)	Each	\$175.00
Specific Gravity and Absorption of Fine Aggregate (C-128)	Each	\$175.00
Unit Weight and Voids in Aggregate (C-29)	Each	\$130.00
Organic Impurities in Fine Aggregate (C-40)	Each	\$130.00
Clay Lumps and Friable Particles (C-142)	Each	\$115.00
Laboratory Time for Special Prep or Test	Hour	\$80.00

Concrete Testing

Concrete Cylinder Compression Test (C-39)	Each	\$18.00
Beam Flexural Test (C-78)	Each	\$60.00
Lightweight Insulating Concrete Compression Test (C-495)	Each	\$80.00
Length of Drilled Concrete Cores (C-174)	Each	\$70.00
Concrete Core Prep and Test (C-42)	Each	\$90.00

** Escalation on future years CS fees and rates at 3%

SCHEDULE OF CONSTRUCTION MATERIALS TESTING SERVICES & FEES

2018 Schedule of Services and Fees**

Cement or Grout Cubes (C-109)	Each	\$30.00
Concrete Mix Design and Trial Batch	Each	\$385.00
Concrete Mix Design Review	Each	\$180.00
Laboratory Time for Special Prep or Test	Hour	\$80.00

Soil Testing

Visual Classification (D-2488)	Each	\$40.00
Moisture Density Relationship "Standard Proctor" (D-698).....	Each	\$160.00
Moisture Density Relationship "Modified Proctor" (D-1557).....	Each	\$210.00
Oversized Correction (D-4718)	Each	\$185.00
Particle Size Analysis (D-442)	Each	\$175.00
Material Finer than No.200 Sieve (D-1140)	Each	\$115.00
Specific Gravity (D-854)	Each	\$160.00
Liquid and Plastic Limits (D-4318)	Each	\$180.00
Organic Content (D-2974)	Each	\$105.00
pH Test (D-4972)	Each	\$105.00
Water Content (D-2216)	Each	\$30.00
Unconfined Compressive Strength (D-2166).....	Each	\$135.00
Permeability –Sand / Aggregate (D-2434)	Each	\$360.00
Permeability– Soil (D-5084)	Each	\$470.00
One Dimensional Consolidation (D-2435)	Each	\$500.00
California Bearing Ratio (D-1883)	Each	\$620.00
Laboratory Time for Special Prep or Test	Hour	\$80.00

Hot-Mix Asphalt Testing (on Premixed Samples)

Asphalt Content by Ignition Method (D-6307).....	Each	\$200.00
Mechanical Analysis of Extracted Aggregate (D-5444).....	Each	\$120.00
Bulk Specific Gravity (D-2726)	Each	\$85.00
Maximum Specific Gravity (D-2041)	Each	\$75.00
Marshall Preparation (D-6926)	Per Pill	\$140.00
Marshall Stability and Flow (D-6927)	Per Pill	\$85.00
Percent Air Voids (D-3203)	Per Pill	\$75.00
Thickness & Density of Asphalt Cores	Per Core	\$85.00

Masonry Testing

Compressive Strength of Mortars (C-780)	Each	\$20.00
Sampling and Testing Grout (C-1019)	Each	\$60.00
Masonry Flexural Bond Strength (C-1072)	Set of 5	\$500.00
Compressive Strength of Masonry Prisms (E-447)	Each	\$120.00
Mortar/ Aggregate Ratio Test (C-780)	Each	\$95.00
Sampling and Testing Concrete Masonry Units ¹ , Set of 6 (C-140)	Each	\$450.00
Sampling and Testing Brick ¹ , Set of 10 (C-67).....	Each	\$450.00

¹Strength, Absorption and Dimensions

Miscellaneous

Fireproofing Density or Adhesion	Each	\$75.00
Moisture Vapor Transmission Testing Kits (Calcium Chloride)	Each	\$75.00

** Escalation on future years CS fees and rates at 3%

Remarks:

- All rates are billed on a portal to portal basis
- Unit prices/rates are in effect for 12 months from the date of this proposal and are subject to change without notice thereafter.
- Transportation and per diem will be charged at the applicable rate.
- Overtime rates are applicable for services performed in excess of 8 hours per day Monday through Friday, before 8:00 AM or after 5:00 PM, and for all hours worked on Saturdays, Sundays and holidays. The overtime rate is 1.5 times the applicable hourly rate.
- A minimum charge of 4 hours applies to field testing and observation services.
- 24-hour notice is required for all scheduling. PSI will try to provide a technician when scheduled the same day, but cannot guarantee that a technician will be available.
- For all PSI services, a project management/engineering review charge will be billed for all reports issued for the scheduling/supervision of personnel and the evaluation/review of data and reports. Concrete compression testing will be charged 0.2 hour of review time for a set of cylinders.
- For all PSI Reports issued, a secretarial charge will be billed for the typing, preparation and distribution of the reports.
- The minimum billing increment for time is one hour.
- Drilling and field service rates are based on OSHA Level D personnel protection.
- For sites where drilling is to occur that are not readily accessible to a truck-mounted drill rig, rates for rig mobility, site clearing, crew stand-by time, etc. will be charged as applicable.
- A project set-up charge of a minimum of two hours applies to all projects.
- Services and fees not listed on this schedule may be quoted on request.
- Invoices will be submitted once a month for services performed during the prior month. Payment will be due within thirty (30) days of receipt of invoice. Interest will be added to delinquent accounts at the rate of one and one-half (1-1/2) percent for each month of delinquency.
- The above unit prices are subject to six (6) percent increase one (1) year from the date of this proposal.
- Less than 24-hour notice for laboratory testing may result in a "rush" charge of 1.5 times the regular rate.
- Miscellaneous materials and supplies, not normally provided such as tapes, rules, survey ribbon, photographic film, patching materials, etc., required to complete the assigned tasks will be charged to the client at cost + 15%.
- Please note that PSI reserves the right to withhold all reports until such time as we receive a signed Contract Acceptance Order or other written authorization to proceed with the work as outlined.
- Issuance of Final Reports is subject to full payment of outstanding invoices

This proposal submitted by:

Company (Legal Registration) Professional Services Industries, Inc. (PSI)

Address 37483 Interchange Drive

City Farmington Hills State MI Zip 48335

Telephone 248-957-9911 Fax _____

Representative's Name Dr. Mahmoud El-Gamal, Ph.D., P.E., D.GE

Representative's Title Vice President/Chief Engineer

Authorized Signature 

E-mail mahmoud.el-gamal@intertek.com

Date November 6, 2018



ENVIRONMENTAL CONSULTING
GEOTECHNICAL ENGINEERING
CONSTRUCTION MATERIALS TESTING & ENGINEERING
INDUSTRIAL HYGIENE SERVICES
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TOTAL QUALITY. ASSURED.

Intertek Total Quality Assurance expertise, delivered consistently with precision, pace and passion, enabling our customers to power ahead safely.

STATE OF MICHIGAN
COUNTY OF OAKLAND

CITY OF NOVI

**AGREEMENT FOR GEOTECHNICAL ENGINEERING
CONSULTANT SERVICES FOR PUBLIC PROJECTS**

BETWEEN

CITY OF NOVI

AND

INTERTEK/PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)

This Agreement is effective this 5th day of December, 2018, and is between the **City of Novi**, 45175 Ten Mile Road, Novi, Michigan 48375 (hereafter "**City**") and **Intertek/Professional Service Industries, Inc. (PSI)**, 37483 Interchange Drive, Farmington Hills, Michigan 48335 (hereafter "**Consultant**").

RECITALS:

The City desires to engage the professional services of the Consultant to perform geotechnical engineering services for public projects on behalf of the City.

The Consultant desires to provide such services, as set forth below and in the attached and incorporated Exhibits, under the terms and conditions hereof.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

1. General Scope of Services and Term of Agreement:

- a. For and in consideration of payment by the City as provided in this Agreement, Consultant shall perform the services described herein, including the services described in Exhibit A—*Geotechnical Engineering Consultant Services For Public Projects*, if and when such services are assigned by the City to Consultant, in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, and in compliance with all terms and conditions of this Agreement.

- b. For geotechnical engineering services for individual projects, if and when assigned to Consultant, including roadway construction and rehabilitation work, sidewalk and pathway construction, water main construction, sanitary sewer/storm sewer construction, underground utility rehabilitation, and traffic signal construction, consultant shall submit an individual work plan and schedule for each project assigned to Consultant by the City based upon the scope of the particular project as described in accordance with Exhibit B— *Geotechnical Engineering Fee Schedule* for that particular type of project. Services shall be assigned to Consultant by approval by the City of a *Work Plan and Schedule*, which shall be prepared for each individual project assigned to Consultant setting forth the specific scope and cost of the particular project. Consultant shall comply with the work description, insurance requirements, and other terms applicable to each individual project as set forth in the *Work Plan and Schedule*.
- c. The term of this Agreement shall be five (5) years from the date set forth above, and will be open for review and negotiation by mutual agreement of Consultant and the City of Novi for any additional terms. However, either party may terminate this Agreement for any reason upon ninety (90) days' written notice to the other party. This Agreement may be terminated by either party upon 7 days' prior written notice to the other party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party. Payments shall be made for work completed up to the termination date.
- d. This Agreement is based on the ordinances, policies, procedures, or requirements in effect on the date of the Agreement. Any additional office or field services required as a direct and apparent result of the change of such ordinances, policies, procedures, or requirements shall be negotiated to the mutual consent of the City and Consultant.
- e. City agrees that the plans, drawings, or other contracted services are primarily for the use of City. All documents prepared by the Consultant, including tracings, drawings, estimates, specifications, field notes, investigations, studies, reports, computer files, field data, notes, etc., in connection with the performance of its duties under this agreement shall become the property of the City upon completion of the services and payment in full of all monies due to the Consultant with respect to the preparation of such document. Reuse of any such materials by City on any extension of any project or any other project without the written authorization of Consultant shall be at City's sole risk. Consultant shall have the right to retain copies of all such materials.
- f. The parties to this Contract intend that the relationship between them created by this Contract is that of service provider and service purchaser. It is expressly agreed, understood and intended that no employee-employer relationship shall exist or be established and that Consultant is an independent contractor who has

been retained to render services to the City to achieve specific results in exchange for specified recompense. As an independent contractor, Consultant expressly agrees that: (a) In the performance of this Contract, the relationship of Consultant to the City shall be that of an independent contractor and not that of an employee or agent of the City, and neither Consultant, nor any agent, employee or permitted subcontractor of Consultant, shall be or may be deemed to be the employee or agent of, or a servant to, the City; (b) Consultant will be solely responsible for payment of salaries, wages, and other compensation for its employees and agents; (c) Neither the Consultant nor any officer, agent, employee or subcontractor of the Consultant shall be eligible for coverage under or eligible to receive the benefits of the City's Workers' compensation, unemployment or health insurance, pension plans or other benefit plans; (d) Consultant is and shall perform under this Contract as an independent contractor, and no liability or responsibility with respect to benefits of any kind, including without limitation, medical/health benefits, Worker's compensation, pension rights, or other rights or liabilities arising out of or related to a contract for hire or employer/employee relationship shall arise or accrue to either party as a result of the performance of this Contract; and (e) Consultant, as an independent contractor, is not authorized to enter into or sign any agreements on behalf of the City.

2. Payment for Services:

- a. Consultant shall invoice City monthly on account of Consultant's services. City shall pay Consultant within thirty (30) calendar days of the time of receipt of invoice from Consultant on account. Subject to sub-paragraph 2(b) below, the City shall pay the undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, Consultant may suspend further performance until payments are current.
- b. City agrees that the periodic billing from Consultant to City are presumed to be correct, conclusive with regard to the services provided, and binding on City unless City, within thirty (30) calendar days from the date of receipt of such billing, notifies Consultant in writing of alleged disagreements with regard to the billing. Errors or discrepancies in a billing recognized after 30 calendar days but not more than 180 calendar days after receipt of invoice from Consultant shall be resolved to the mutual satisfaction of both parties. After 180 calendar days after receipt of invoice from Consultant, the professional services provided by Consultant shall be viewed as acceptable and closed.
- c. All fees and/or costs associated with or due to any governmental or review agencies arising from the services are the sole responsibility of the City.
- d. For individual projects assigned to Consultant in accordance with Section 1(b) above, a more specific procedure for submission and approval of billing statements may be set forth in the *Work Plan and Schedule* for each project. The

City shall confirm the correctness of any progress estimates made for billing purposes, and may use City staff for such purposes. Monthly statements for services shall be accompanied by such properly completed reporting forms and such other evidence of progress as may be required by the City.

- e. In the event of termination for a substantial failure by the Consultant to fulfill its obligations under this agreement through no fault of the City, Consultant shall be paid as compensation in full for services performed to that date an amount calculated in accordance with the *Work Plan and Schedule* for that particular project. Such amount shall be paid by the City upon Consultant's delivering or otherwise making available to the City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been prepared and/or accumulated by Consultant in performing the services up to the date of termination.

3. Indemnification and Liability:

- a. The Consultant agrees to hold harmless and indemnify the City, its officers, agents, employees from and against all claims, demands, suits liability, losses, damages or costs (including reasonable attorney fees and costs) to the extent arising out, of or resulting from the Consultant's tortious or negligent acts, errors, or omissions in performing this Agreement and all Supplemental Agreements.
- b. The City and Consultant acknowledge that the Consultant's Scope of Services does not include any services related to the presence of any hazardous or toxic materials. In the event the Consultant or any other party encounters any hazardous or toxic materials, or should it become known to the Consultant that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of the Consultant's services, the Consultant may, at its option and without liability for consequential damages, suspend performance of its services under this Agreement until such time as the City retains appropriate Consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations.
- c. Consultant shall not be liable for damages resulting from the actions or inactions of any governmental agencies, including, but not limited to, plan processing; provided, however, that this provision shall not relieve Consultant of its obligations under this Agreement, including all Exhibits hereto, with respect to its securing, or assisting the City in securing, various governmental permits and appraisals in a manner consistent with the standard of care set forth in Paragraph 1.a. above.
- d. Except as specifically set forth in the applicable *Work Plan and Schedule*, the City acknowledges that Consultant is not responsible for the performance or work by

third parties, including, but not limited to, construction contractors or their subcontractors.

4. Insurance:

- a. During the term of this Agreement, Consultant shall obtain and maintain in full force, at its own expense, the following insurance coverage in not less than the following amounts:
 - i. Worker's Compensation insurance relative to all Personnel engaged in performing services pursuant to this Agreement, with coverage not less than that required by applicable law,
 - ii. Comprehensive General Liability Public Liability, for occurrences while engaged in performing services pursuant to this Agreement, with coverage not less than the amount of \$1,000,000 per occurrence;
 - iii. Professional Liability (Including Errors and Omissions) Insurance in the amount of \$1,000,000 per claim
 - iv. Automotive Insurance covering all owned, hired, and non-owned vehicles with insurance to comply with the Michigan No-Fault Insurance Law, including Regional Liability Insurance with minimum bodily injury limits of \$1,000,000 each occurrence and minimum property damage of \$1,000,000 per occurrence.
- b. Consultant shall be responsible for all deductibles contained in any insurance required hereunder.
- c. If during the term of this Agreement changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate existing insurance limits, the Consultant will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such reasonable additional insurance coverage cost shall be paid for by the City of Novi, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City. The cost of insurance for individual projects shall be factored into the established fee curves in Exhibit B—*Geotechnical Engineering Fee Schedule* for each particular type of project
- e. All policies shall name the Consultant as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the City.

- f. With the exception of Professional Liability, all insurance policies shall name the City of Novi, its officers, agents, and employees as additional insured. Certificates of Insurance and required endorsements evidencing such coverage shall be submitted to Sue Morianti, Purchasing Manager, City of Novi, 45175 Ten Mile Road, Novi, MI 48375-3024 prior to the commencement of performance under this Agreement and at least fifteen (15) days prior to the expiration dates of expiring policies.
- g. If any service is sublet in connection with this Agreement, the Consultant shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Consultant.
- h. The provisions requiring the Consultant to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Consultant under this Agreement.
- i. Coverage under the general and auto liability policies shall be considered to be the primary coverage rather than any policies and insurance or self-insurance retention owned or maintained by the City of Novi. This coverage shall be primary to the Additional Insureds, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether other available coverage is primary, contributing or excess.
- j. The Policies shall be endorsed to provide the City with thirty (30) days prior written notice of cancellation or nonrenewal.

5. Entire Agreement

- a. Except for the terms of each *Work Plan and Schedule*, which shall be deemed additional terms to this Agreement, this Agreement contains the entire agreement between the City and Consultant relating to services to be provided by Consultant to the City. Any prior agreements, promises, negotiations, and representations not expressly set forth in this Agreement are of no force or effect. Subsequent modifications to this Agreement shall be in writing and signed by both City and Consultant.
- b. With respect to any direct conflict between the terms of this Agreement and any *Work Plan and Schedule* as defined in Section 1(b) above, the terms of the *Work Plan and Schedule* shall control with respect to that individual project.
- c. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.

6. Assignment:

Neither City nor Consultant shall assign this Agreement without the prior written consent of the other.

7. Severability:

Waiver of any term, condition, or covenant, or breach of any term, condition, or covenant, shall not constitute the waiver of any other term, condition, or covenant, or the breach of any other term, condition, or covenant. If any term, condition, or covenant of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions of this Agreement shall be valid and binding on City and Consultant, unless the court's action or holding has the effect of frustrating the purpose of this Agreement.

8. Delays:

It is expected that the Consultant will perform the work in a timely fashion in accordance with the schedule that is agreed upon at the commencement of each project. The Consultant shall provide requested items within ten (10) working days of the request. Deliverables (engineering reports, test results, boring logs, approval letters, rejection letters, inspection reports, etc.) shall be submitted to appropriate City staff no later than ten (10) working days after the work is performed.

Consultant is not responsible for delay caused by activities or factors beyond the Consultant's reasonable control, including but not limited to, delays by reason of strikes, lockouts, except with respect to Consultant's own employees, service slowdowns or stoppages, accidents, acts of God, failure of Client to furnish timely information or approve or disapprove of Consultant's services or product promptly, faulty performance by the City or the City's other contractors or government agencies. When such delays beyond the Consultant's reasonable control occur, City agrees Consultant is not responsible for damages nor shall Consultant be deemed to be in default of this Agreement.

No charges or claims for damages shall be made by the Consultant for delays or hindrances from any cause whatsoever during the progress of any portions of the services specified in this Agreement, except as hereinafter provided.

In case of a substantial delay on the part of the City in providing to the Consultant either the necessary information or approval to proceed with the service resulting through no fault of the Consultant, in delays of such extent as to require the Consultant to perform its services under changed conditions not contemplated by the parties, the City will be responsible for supplemental compensation limited to increased costs incurred as a direct result of such delays. Any claim for supplemental compensation must be in writing and accompanied by substantiating data.

When delays are caused by circumstances or conditions beyond the control of the Consultant as determined by the City, the Consultant shall be granted an extension of time for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the permitting of the Consultant to proceed to complete the services, or any part of them, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights herein set forth.

9. Disclosure:

Consultant affirms that it has not made or agreed to make any valuable gift whether in the form of service, loan, thing, or promise to any person or any of the person's immediate family, having the duty to recommend, the right to vote upon, or any other direct influence on the selection of consultants to provide professional design services to the City within the two years preceding the execution of this Agreement. A campaign contribution, as defined by Michigan law shall not be considered as a valuable gift for the purposes of this Agreement.

10. Nondiscrimination:

The Consultant shall not discriminate against any employee, or applicant for employment because of race, color, sex, age or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78 Stat. 252 and 1976 PA 4563) and will require a similar covenant on the part of the consultant or subcontractor employed in the performance of this Agreement.

11. Approval; No Release:

Approval of the City shall not constitute nor be deemed release of the responsibility and liability of Consultant, its employees, associates, agents and consultants for the accuracy and competency of their designs, drawings, and specifications, or other documents and services; nor shall that approval be deemed to be an assumption of that responsibility by the City for any defect in the designs, drawings and specifications or other documents prepared by Consultant, its employees, subcontractor, agents and consultants.

12. Compliance With Laws:

This Contract and all of the Consultant's Professional Services and practices shall be subject to all applicable state, federal and local laws, rules or regulations, including without limitation, those which apply because the City is a public governmental agency or body. Consultant represents that it is in compliance with all such laws and eligible and qualified to enter into this Agreement.

13. Notices:

Written notices under this Agreement shall be given to the parties at their addresses on page one by personal or registered mail delivery to the attention of the following persons:

City of Novi: **Jeff Herczeg, Director of Public Works and Cortney Hanson, Clerk, with a copy to Thomas R. Schultz, City Attorney**


Consultant: _____

CITY OF NOVI

By _____
Robert J. Gatt, Mayor

By _____
Cortney Hanson, Clerk

CONSULTANT – INTERTEK/PSI

By 
Mahmoud El-Gamat, Ph.D, PE, D.GE
Vice President
12/5/2018

Qualifications to Provide:

**As-Needed Geotechnical Engineering
Consultant Services for Public Projects**

Submitted to:
City of Novi



“Engineering Client Success”

*TEC Proposal #060-18-0315
Submitted: November 7, 2018*





Testing Engineers & Consultants, Inc.

1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

November 7, 2018

TEC Proposal No. 060-18-0315

City of Novi
Finance Department
45175 Ten Mile Road
Novi, Michigan 48375

**Re: Qualifications to Provide Geotechnical Engineering/Consultant Services
For Public Projects 2018-2023**

Dear Selection Committee:

Testing Engineers & Consultants, Inc. (TEC), a certified Woman-owned Business Enterprise (WBE), is pleased to present our **Qualifications** for all aspects of geotechnical engineering and material testing services needed for fiscal years 2018-2023. We have carefully reviewed the formal Request for Qualifications in preparation of the enclosed submittal.

Through our extensive project history with local Municipalities, the State of Michigan, regional organizations such as Washtenaw County Road Commission and the Road Commission for Oakland County, we are very aware that our fellow residents expect the best infrastructure for the least cost and the fewest number of construction days. Our infrastructure team brings five decades of work history in support of clients just like City of Novi.

A staff of professional engineers, full service laboratories and experienced support staff assist TEC's field personnel as necessary, to ensure a successful project outcome. As our Client, you benefit from the cost and time minimizing aspects of utilizing in house resources, such as TEC's fleet of drill rigs, all- terrain vehicles, and rig- mounted direct push equipment for environmental drilling. Our AASHTO accredited laboratory supports field personnel to provide test results in a prompt and cost-effective manner.

TEC is headquartered in Oakland County and our roots run deep. Our 52 years of professional experience aligns perfectly with the engineering and testing services required for this contract. We look forward to continuing our working relationship into the next two years and beyond.

Respectfully yours,
TESTING ENGINEERS & CONSULTANTS, INC.

Carey J. Suhan, PE
Vice President & Principal

William J. West, PE
Manager, Construction Services

Enclosures

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All services undertaken are subject to the following policy. Reports are submitted for exclusive use of the clients to whom they are addressed. Their significance is subject to the adequacy and representative character of the samples and the comprehensiveness of the tests, examinations and surveys made. No quotation from reports or use of TEC's name is permitted except as expressly authorized by TEC in writing.

Proposal Signature Page

SECTION 1 FIRM BACKGROUND

SECTION 2 STATEMENT OF UNDERSTANDING

- Statement of Understanding Narrative
- MDOT Prequalification Classifications
- AASHTO Laboratory Accreditation

SECTION 3 KEY STAFF EXPERIENCE & CREDENTIALS

- Team Organization
- Resumes & Licenses / Certifications

SECTION 4 FIRM QUALIFICATIONS

- Ability to Respond
- Municipal Contracts
- Relevant Project Descriptions
- Municipal Client References

ATTACHMENT A FEE PROPOSAL (Under Separate Cover)

Testing Engineers & Consultants, Inc.

This proposal submitted by:

Company (Legal Registration) Testing Engineers & Consultants, Inc.

Address 1343 Rochester Road

City Troy State Michigan Zip 48083

Telephone 248-588-6200 Fax 248-588-6232

Representative's Name Carey J. Suhan, PE

Representative's Title Vice President & Principal

Authorized Signature _____

E-mail csuhan@tectest.com

Date November 7, 2018

SECTION 1

FIRM BACKGROUND

Testing Engineers & Consultants, Inc. (TEC), a certified Woman Business Enterprise founded and Incorporated in the State of Michigan in 1966, is pleased to present our qualifications for all aspects of geotechnical engineering required for the City of Novi's 2018-2023 as-needed contract. As a firm with numerous as-needed contracts for public agencies throughout southeast Michigan, we are very aware of what residents expect including the best infrastructure for the least cost and efficient construction. This can only be accomplished with an experienced Project Team that has hands on working knowledge of the City's needs and expectations and has experience working with other City project firms to meet and manage the project and meet the deadlines.

"Always can count on TEC for testing services. You are one of our "preferred" testing consultants. We always recommend your services to our clients."

Ronald Syme, Jr., AIA, LEED AP
Wakely Associates for Macomb County
May 2013

A staff of professional engineers, MDOT approved QA/QC procedures, full service laboratories, and experienced support staff assist TEC's field personnel to ensure a successful project outcome. As our Client, you benefit from the cost and time minimizing aspects of utilizing in-house resources, such as TEC's fleet of drill rigs, all-terrain vehicles, and rig-mounted direct push equipment for environmental drilling. Our AASHTO accredited laboratory supports field personnel to provide test results in a prompt and cost-effective manner.

TEC is headquartered in Troy with Branch Offices in Ann Arbor and Detroit. Our 52 years of professional experience aligns perfectly with the engineering services required for this contract. TEC currently holds the as-needed geotechnical and materials testing contract with the City of Novi and we look forward to continuing our working relationship.

The work will be performed with staff from our Ann Arbor Office located at: 3985 Varsity Drive, Ann Arbor, MI 48108 • 734-971-0030 • 734-971-3721 (f) and our Troy office at: 1343 Rochester Road, Troy, MI 48083 • 248-588-6200 • 248-588-6233 (f)

Prime Client Contacts

Mr. Carey J. Suhan, PE, Vice President and Principal, will be the Project Principal and contract administrator for this contract. Mr. Suhan can be reached via cell 248-361-0764 or email csuhan@tectest.com.

Mr. William J. West, PE, is the designated Project Manager and primary contact for the as-needed contract and will be responsible for developing and implementing geotechnical investigations, coordinating and managing all field and laboratory activities as well as engineering analysis and report preparation. Mr. West can be reached at 248-588-6200, ext. 128, or on his cell at 248-825-7442, or email wjwest@tectest.com.

SECTION 2

STATEMENT OF UNDERSTANDING

- Statement of Understanding Narrative
- MDOT Prequalification Classifications
- AASHTO Laboratory Accreditation

STATEMENT OF UNDERSTANDING

Introduction

In response to your request, we at Testing Engineers & Consultants, Inc. (TEC), a WBENC certified woman-owned firm (WBE), are pleased to submit our Qualifications to provide professional geotechnical engineering and construction materials testing services on various federal, state and locally funded road and infrastructure projects throughout the City of Novi. As an Oakland County headquartered firm, we have a vested interest in maintaining safe roads and bridges in our Community.

Understanding of Services

TEC understands that City of Novi is soliciting Qualifications to perform professional geotechnical investigation and construction materials testing services on various road and infrastructure projects throughout City of Novi for fiscal years 2018 – 2023.

We understand that up to two (2) Consultants will be selected to perform the necessary services after review of the submittals. A fee proposal, based on the fee percentages contained in Attachment A of this submittal, will be prepared at that time and if found reasonable, the City will work with the qualified consultants to develop a uniform fee structure. Upon agreement on the fee structure, qualified and approved Consultants will be placed on a list of consultants to provide the as-needed engineering services.

TEC has the necessary resources and will furnish all staff and equipment to the satisfaction of City of Novi to perform the requested geotechnical and materials testing services. All work will be performed in accordance with applicable federal, state and local professional standards.

TEC will comply with all standard construction practices of City of Novi; the project construction contract, proposal, and plans; the Standard Specifications for Construction, MDOT Uniform Field Soil Classification System Guide document and applicable publications referenced within; such as the Michigan Construction Manual, the Materials Source Guide; the Materials Quality Assurance Procedures Manual; AASHTO LRFD Bridge Design Specifications, applicable Special Provisions; FHWA procedures, ASTM Standards and all other references guidelines, and procedures manuals needed to carry out the work described herein in an appropriate manner.

All inspection and testing of soils, concrete and bituminous, will be in conformance with the MDOT materials sampling guide, the Michigan Construction Manual, the specifications, plans and the individual project proposal. A TEC certified technician will determine the compliance of the work performed and immediately report any non-compliance or trend toward non-compliance to City of Novi representative.

Credentials

TEC has been providing geotechnical and construction material testing services on road, utility, traffic signal and pedestrian pathway projects throughout Michigan and the surrounding states

for the past 52 years. TEC has extensive relevant experience providing these types of services to numerous municipalities (including the City of Novi), WCRC, RCOC, MCDR, and other public owners/agencies in Michigan. Documentation of TEC's MDOT Prequalification and AASHTO Accreditation are included at the end of this section.

Furthermore, TEC has provided Geotechnical and Construction Materials Testing services to MDOT and as part of the MDOT design teams for at least 25 years. TEC's engineers and technicians have a thorough knowledge of appropriate County and MDOT standards and procedures as well as ASTM, AASHTO, FHWA and others.

In addition – TEC maintains two offices & laboratories within the specified 35 mile radius from the Novi Civic Center. The Troy, MI and the Ann Arbor, MI locations are within the specified radius and are available to assist in serving the City of Novi.

TEC has provided coring, drilling, sampling, laboratory analysis and engineering services for countless roads, bridges, utilities, pedestrian paths, boardwalks, embankments, retaining walls and other structures. We currently hold, and have had as-needed contracts with numerous governmental entities, providing us extensive experience with road and utility projects. Through this experience, we are extremely proficient at coordinating permits, traffic control, scheduling, and other related tasks. As an example, we have had as-needed contracts with the Cities of Troy and Sterling Heights for over 30 years and consequently have provided Geotechnical and Materials Testing services on nearly every road project within these cities in the last 35 years or more. We also maintain an as-needed blanket geotechnical engineering and construction materials testing contracts with the Cities of Farmington Hills, Rochester Hills and Port Huron. In addition, TEC maintains a blanket Geotechnical and Materials Engineering contract the Road Commission for Oakland County (RCOC).

Equipment

To ensure quality sampling and field results and to minimize start times and coordination of outside resources, TEC will utilize *its own fleet of drill rigs* for this contract.

Truck and ATV-mounted rigs are generally capable of drilling to depths of approximately 100 feet with up to 6 ¼" I.D. hollow-stem augers and deeper with smaller augers and 300+ feet with wash boring methods. Up to four-inch diameter, wells can be installed to these depths and six-inch wells can be installed to a depth of 30 feet. TEC also maintains in house direct push capabilities typically used for environmental sampling.

Trailer-mounted and portable drill rigs are capable of drilling to depths of approximately 25 to 30 feet with solid-stem augers. All rigs are capable of SPT, Shelby Tube and Piston sampling.

As evidenced in the enclosed documentation, TEC owns a full complement of additional sampling and evaluation tools such as coring machines, hand augers, portable tripod and cat-head sampling system, dynamic cone Penetrometer, vane shear, ground penetrating radar,

seismographs for vibration monitoring and slope inclinometer equipment. Our engineering and technical staff is experienced in many other evaluation techniques such as pressure-meter testing, dilatometer testing, cross-hole testing and other non-destructive testing methods.

Should an unexpected environmental condition be discovered during any construction project, TEC staff can call upon our own civil and environmental engineers, professional geologists and MDEQ certified underground storage tank professionals “as needed” to evaluate the conditions, make recommendations and that can be paramount in helping to keep your project on schedule.

Laboratory Testing

Geotechnical Laboratory

TEC’s lab is accredited by AASHTO, is routinely inspected by the AASHTO Materials Reference Laboratory and the Cement and Concrete Reference Laboratory, and has been deemed competent by the Army Corp of Engineers to conduct materials testing services. TEC’s experienced engineering technicians and engineers will perform the required laboratory testing such as gradation analysis, permeability testing, unconfined compressive strength testing, consolidation testing, Atterberg Limits testing and other tests deemed appropriate by City of Novi project staff. Furthermore, TEC has capabilities to perform nearly any other geotechnical laboratory test in accordance with all ASTM, MDOT, AASHTO, FAA, and Michigan DOT MTM guidelines. *All results will be reviewed for accuracy by Mr. Carey Suhan, PE – Senior Technical Advisor.*

Safety

TEC views safety to be of utmost importance and will take all practical steps to safeguard employees from accidents and to maintain at all times a safe work environment for project staff and the traveling public. To ensure that all field staff are working in accordance with applicable safety procedures, TEC entered a “Safe-2-Work” training program in January 2003, (which has transitioned to the “MUST” program) and we continually monitor its results for effectiveness.

TEC’s field staff attend regularly scheduled safety meetings and are trained in the MUST Program safety modules. To that end, TEC staff will wear the appropriate personal protective equipment (PPE) as stated in MDOT’s Guidance Document #10118 and comply with MIOSHA regulations and safety policies while working on any City project.

Safety during traffic control requires a comprehensive approach to protect the general public and project personnel during construction activities. TEC will perform traffic control or coordinate with a sub-consultant traffic control firm, as required, and City of Novi personnel to ensure “best safety practices” are used at all times in accordance with MMUTCD, OSHA and MIOSHA standards. Where appropriate, TEC will prepare a site-specific Safety Plan prior to commencing with the project.

TEC’s designated Safety Officer is Mr. William J. West, PE and he can be reached at 248-588-6200, ext. 128, cell #248-825-7442, and/or wjwest@tectest.com.

TEC has had a quality improvement process (QIP) in place for over 25 years and our QA/QC Plan has been approved by MDOT. Our firm is committed to quality and we are confident and committed to providing City of Novi with efficient, cost-effective and quality services.

Communication

“Mr. Carey Suhan is very responsive and expeditious on projects with time constraints.”

In order for the Team to efficiently operate on and off-site, a Communications Plan will be established with input from the Commission, to respond to any issues that may arise during a project. The Team is equipped with cellular telephones and will communicate directly with TEC’s Project Manager or Project Engineer, should any conditions arise that need immediate attention and direction as part of TEC’s QA/QC procedures and City of Novi policies. The project manager will communicate with City of Novi to resolve any issues and determine a course of action to minimize delay and additional cost.

Noel Santos, PE
City of Sterling Heights

A detailed organization chart, Team Introductions and Professional Resumes are enclosed in *Section 3 – Key Staff Credentials* of this submittal.

TEC fully understands the nature of an “As-Needed” Contract with respect to responsiveness, efficiency and outcome. TEC has a long list of As-Needed Contracts that we have had or are currently servicing. We pride ourselves in our ability to respond to the needs of our Clients.

- **CITY OF NOVI** As-Needed Geotechnical and Materials Testing Contract
Contact: George Melistas and Aaron Staup
Phone: 248-347-0454
- **OAKLAND COUNTY** Facilities As-Needed Blanket Contract
Contact: Jim Emerick
Phone: 248-858-1515
- **MDOT** As-Needed Asbestos Investigations
Contact: James Woodruff
Phone: 517-322-1205
- **MDOT** As-Needed Pre-cast and Steel Fabrication Bridge Inspections
Contact: Al Hagen
Phone: 517-355-6450
- **Sterling Heights** As-Needed Geotechnical, Environmental, and Materials Testing Contract
Contact: Brent Bashaw, PE
Phone: 586-446-2583
- **City of Troy** As-Needed Blanket Contract
Contact: Bill Houtari, PE
Phone: 248-524-3300

- **City of Rochester Hills** As-Needed Blanket Contract
Contact: Paul Shumejko, PE, PTOE
Phone: 248-841-2489
- **City of Farmington Hills** As-Needed Blanket Contract
Contact: James Cubera, PE
Phone: 248-871-2560
- **City of Port Huron**
Contact: Dave Smith, PE
Phone: 810-984-9730

Prequalified Service Vendors

Vendor names containing: Testing Engineers

As of October 16, 2018

Service Prequalification Classification	Vendor	State	Phone	Status	DBE Certified
Construction Inspection: HMA Pavement	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Construction Testing: Aggregates	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Construction Testing: Concrete	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Construction Testing: Density	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Construction Testing: HMA Assistance	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Design - Geotechnical	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No
Environmental: Contamination	TESTING ENGINEERS & CONSULTANTS, INC.	MI	248-588-6200	Approved	No



AASHTO
ACCREDITED

CERTIFICATE OF ACCREDITATION

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO

Testing Engineers & Consultants, Inc.

in

Troy, Michigan, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).

Bud Wright,
AASHTO Executive Director

Moe Jamshidi,
AASHTO COMP Chair

This certificate was generated on 10/16/2018 at 5:18 PM Eastern Time. Please confirm the current accreditation status of this laboratory at aashtoresource.org/aap/accreditation-directory

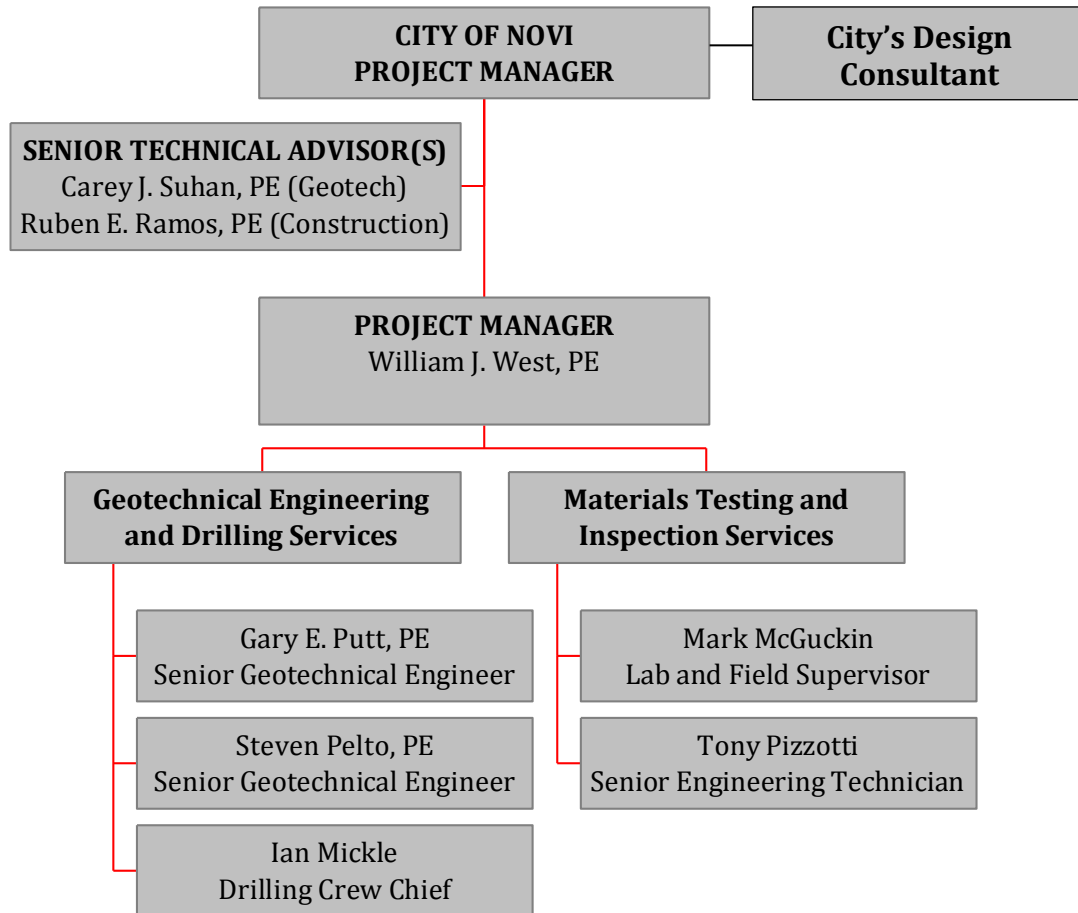
SECTION 3

KEY STAFF EXPERIENCE & CREDENTIALS

- Team Organization
- Resumes & Licenses / Certifications

TEAM ORGANIZATION

We have assembled a team of professionals with the required experience and credentials to address the needs of the City of Novi. The following organization chart and introductions highlight the key staff designated for this contract. Professional resumes outlining the Team’s specific road experience and credentials are enclosed later in this section.



Carey J. Suhan, PE, Senior Technical Advisor and Contract Administrator, will be responsible for senior review (QA/QC) of all field, laboratory and final reports as well as contract administration. Mr. Suhan is Vice President – Geotechnical Services and has over 31 years experience in providing geotechnical engineering services. He is a licensed Professional Engineer in the State of Michigan and holds a Masters in Civil Engineering with Geotechnical Concentration from Wayne State University and Bachelor of Science in Civil Engineering from U of M. Mr. Suhan has performed geotechnical engineering throughout his career for countless road and bridge projects involving drilling, sampling, pavement coring, in-situ testing, laboratory analyses and engineering recommendations for pavements and structures.

William J. West, PE, Project Manager, will be the Prime Contact for geotechnical engineering investigations, materials testing and inspection projects. Mr. West brings over 25 years of experience

TEAM ORGANIZATION Cont.

in the development and implementation of geotechnical investigations for municipal infrastructure improvements, management of construction materials testing, construction materials and geotechnical laboratory testing, field inspection services. This background is a key piece of his importance on the Team. He oversees all quality control and safety issues. Responsibilities include assurance that all TEC personnel are certified and qualified to perform their task, familiar with the plans and specifications, City and consultant representatives, as well as the work in progress and that each technician understands his task on the site, the chain of command and the response to non-conformance items. Mr. West also serves as the Company Safety Officer.

Geotechnical Engineering Staff

Gary E. Putt, PE, Senior Geotechnical Engineer, will be responsible for coordinating and managing all field and laboratory activities as well as adherence to budget and schedule. He has 44 years experience in geotechnical analysis, pavement consulting, sub grade stabilization, construction materials testing and inspection, construction management, structural foundation design, earth retention structure design and coordination of contractor activities. Mr. Putt has been involved in numerous RCOC and MDOT road projects and is experienced in road projects involving drilling, sampling, pavement coring, in-situ testing, laboratory analyses and engineering recommendations. He is a Licensed Professional Engineer in the State of Michigan, and holds a Bachelor of Science in Construction Engineering from Lawrence Technological University.

Steven Pelto, PE, Senior Geotechnical Engineer, will work closely with Mr. Putt to provide geotechnical engineering support. With over 25 years' experience, Mr. Pelto has provided engineering recommendations on municipal, commercial, industrial, and residential projects. His expertise includes evaluation of distress studies for pavements, building foundations and floor slabs, foundation underpinning, bearing capacity analyses, deep foundation analyses, retaining wall analyses and design, settlement analyses and construction dewatering feasibility studies. He possesses an MS in Geotechnical/Environmental Engineering, a BS in Civil Engineering, and an AAS in Civil Engineering Technology and is a Licensed Engineer in the State of Michigan.

Ian Mickle, Senior Driller, will be responsible for all drilling activities and will assist with coordination of traffic control and utility clearance activities as needed. Mr. Mickle has 39 years experience in operating drilling equipment and supervising drilling crews for geotechnical projects. He has extensive experience in pavement coring and subbase sampling, SPT, Shelby tube and piston sampling, hollow stem augering, rotary wash drilling, rock coring and vibra coring, monitoring well installation and down hole in-situ testing. Mr. Mickle holds an Associate Degree in Geological Engineering from the Sault College of Applied Arts and Technology.

Materials Testing and Laboratory Services Key Staff

Mark McGuckin, Field and Laboratory Supervisor, brings 20 years of experience in field inspection and testing of construction materials, including density verification of fills and; quality control inspection of structural fills and pavement structure elements; proof roll observations and recommendations, pavement core sampling, quality control inspection and testing of Portland Cement Concrete (PCC) and Bituminous Concrete; and proper construction and placement of

TEAM ORGANIZATION Cont.

reinforcing steel. Mr. McGuckin will schedule his staff so that all work is covered and he is able to meet every client's immediate needs. Mark has supervised the field and lab services for ten years and has been involved in every project that TEC has handled during that period.

Tony Pizzotti, Senior Engineering Technician (Field and Laboratory), has over 20 years of relevant experience and holds the following certifications: Certified MCA / ACI Concrete Technician Level I, MDOT Density Technology, MDOT Local Agency HMA Sampling, and Troxler Certificatied for Nuclear Density Gauge. Mr. Pizzotti has performed field and lab services for numerous municipalities on road, water mains / saniarty sewers, pathways, and municipal facilities projects.

TEC has a host of additional experienced technicians that possess Level I Concrete and Density Technology Certifications that can assist on City of Novi projects. Resumes of selected staff are also enclosed in this section.

CAREY J. SUHAN, PE

TITLE: Vice President, Geotechnical and Environmental Services

EDUCATION:

BS, Civil Engineering
University of Michigan, 1985

MS, Civil Engineering
(Geotechnical/Environmental Concentration)
Wayne State University, 1995

PROFESSIONAL DEVELOPMENT:

FRA Contractors On Track Safety Training,
2009

MDEQ RBCA Training Course, 1995

OSHA HAZWOPER Course, 1987
Environmental Site Assessment Seminar, PSI,
1987

8-Hour HAZWOPER Waste Supervisor
Certification Training (OSHA) 1987

Deep Foundations Institute Annual Conference,
1991

40-Hour HAZWOPER Training Certification
(OSHA)

8-Hour HAZWOPER Training Refresher, Annually
Fundamentals of Deep Foundation Design,
University of Missouri Rolla, 1989

LICENSES/REGISTRATION: Licensed Professional Engineer, State of Michigan,
#2601036161, 1990

Licensed Professional Engineer, State of Ohio, #78837, 2014

EXPERIENCE:

Thirty-one (31) years' experience in geotechnical engineering, pavement evaluation, construction materials testing and environmental site assessment investigations and supervision of engineering and technical staff. Responsibilities include development of geotechnical exploration programs; field and advanced laboratory testing of soils and construction materials, preparation of pavement, foundation and construction recommendations. Supervises drilling crews performing geotechnical and environmental sampling, piezometer, and ground water monitoring well installation. Extensive experience with Michigan municipalities and civil design firms on pavement reconstruction, resurfacing, widening and re-routing of roads and parking lots.

PROJECT EXPERIENCE:

- City of Novi as-needed geotechnical engineering and construction materials testing contract. TEC was selected in 2014 and has completed at over 30 geotechnical projects to date (including roads, trails/pathways, infrastructure, and traffic signals. Prior to this contract, we also performed numerous road and utility services for Novi.
- City of Farmington Hills as-needed contract for geotechnical engineering and construction materials testing. TEC performed pavement investigation and evaluation for local roads program. Scope included soil borings, pavement cores and recommendations for pavement and utilities at 28 sub-divisions.
- City of Sterling Heights as-needed services contract: TEC has had this contract for at least 29 years. Consequently, Mr. Suhan has served as project manager or principal for every road,

CAREY J. SUHAN, PE

MUNICIPAL PROJECT EXPERIENCE Cont.

sewer or water main geotechnical and pavement investigation since 1990, on over 65 projects including buildings, parks and other special projects.

- City of Troy as-needed services contract: TEC has had this contract for at least 30 years. Mr. Suhan has been the project manager or principal for every road, sewer or water geotechnical investigation since 1990. This contract has included over 74 geotechnical projects including buildings, parks and other special projects.
- TEC has provided services to MDOT under an as-needed services geotechnical services contract for metro region. Projects have included interchange improvements, detention ponds, paths and culvert replacement.
- TEC has and has had as-needed services contracts with the City of Rochester Hills, City of Port Huron and City of Royal Oak. TEC has extensive pavement and utility investigation, and engineering experience associated with these contracts. Projects have included interchange improvements, detention ponds, pedestrian paths and culvert replacement. Mr. Putt is the project manager for this contract.
- West Bloomfield Township Civic Center – TEC has performed three geotechnical investigations for the paving at the complex. Most recently in 2011 an investigation was performed to reconstruct the entire complex pavement. TEC worked closely with Nowak & Fraus to develop recommendations and plans to improve drainage, while minimizing export and import of materials by using the pulverized asphalt for shaping and as pavement base material. Cost savings of this approach allowed the township to reconstruct the entire complex pavement within their budget.
- Road Commission for Oakland County (RCOC) and Macomb County Department of Roads MCDR as-needed contracts include geotechnical engineering and materials testing services. Recent projects have included intersection traffic signals, culvert replacement, road improvements and geotextile testing.

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF PROFESSIONAL LICENSING

N461657

PROFESSIONAL ENGINEER
LICENSE

CAREY J SUHAN

LICENSE NO.
6201036161

EXPIRATION DATE
10/31/2020

AUDIT NO
3357963

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GARY E. PUTT, PE

TITLE: Senior Project Engineer

EDUCATION: BS, Construction Engineering, Lawrence Technological University, 1972

PROFESSIONAL DEVELOPMENT:

Fundamentals of Shallow Foundation Design,
University of Missouri Rolla, 1981
Concrete Technology, Michigan State University,
1992

Design of Roadway Drainage Systems,
Geotechnical Systems, LLC, 2003
Thickness Design for Municipal Pavements,
American Concrete Pavement Association, 2008

Welding Inspection Technology,
American Welding Society, 1986
Storm Water Management, DEQ 1996

Lime-Treated Soil, Carmeuse North
America, 2005
LRFD For Highway Bridge
Substructures and Earth Retaining
Structures

LICENSES/REGISTRATION: Licensed Professional Engineer, State of Michigan, 1992
Licensed Professional Engineer, State of Missouri, 1989

EXPERIENCE:

Forty-four (44) years' experience in geotechnical analysis, construction materials testing and inspection, construction management, structural foundation design both shallow and deep, earth retention structure design and coordination of contractor activities. Performs all types of routine and advanced soil tests in lab and fields. Performs all types of concrete and asphalt tests and inspections. Extensive pavement consulting experience with government entities, civil engineering firms and contractors. Evaluates bearing capacity and settlement potential from geotechnical data. Determines scope of work and arranges geotechnical investigations. Supervises drilling crews on geotechnical and environmental projects. Managed field and laboratory technicians in construction services department, and report review.

MUNICIPAL PROJECT EXPERIENCE:

- City of Novi as needed geotechnical engineering and construction materials testing contract. TEC was selected in 2014 and has completed OVER 30 geotechnical projects of varying types to date. Prior to this contract, we also performed numerous road and utility services for Novi.
- City of Sterling Heights and Troy as-needed services contracts: TEC has had both of these contracts for at least 29 years. Consequently, Mr. Putt has served as project engineer for road, sewer or water main geotechnical and pavement investigation since 2000, on over 35 projects in Sterling Heights and 40 projects in Troy.
- TEC has provided services to MDOT under an as-needed services geotechnical services contract for metro region. Projects have included interchange improvements, detention ponds, pedestrian paths and culvert replacement. Mr. Putt is the project manager for this contract.

GARY E. PUTT, PE

MUNICIPAL PROJECT EXPERIENCE Cont.

- TEC has and has had as-needed services contracts with the City of Rochester Hills, City of Port Huron, City of Farmington Hills and City of Royal Oak. TEC has extensive pavement and utility investigation, and engineering experience associated with these contracts. Projects included are roads, boardwalks, pedestrian paths, facilities, infrastructure, and parking lots/structures.
- City of Farmington Hills as needed contract for geotechnical engineering and construction materials testing. TEC performed pavement investigation and evaluation for local roads program. Scope included soil borings, pavement cores and recommendations for pavement and utilities at 28 sub-divisions.
- West Bloomfield Township Civic Center – TEC has performed three geotechnical investigations for the paving at the complex. Most recently in 2011 an investigation was performed to reconstruct the entire complex pavement. TEC worked closely with Nowak & Fraus to develop recommendations and plans to improve drainage, while minimizing export and import of materials by using the pulverized asphalt for shaping and as pavement base material. Cost savings of this approach allowed the township to reconstruct the entire complex pavement within their budget.
- Road Commission for Oakland County (RCOC) and Macomb County Department of Roads MCDR as-needed contracts include geotechnical engineering and materials testing services. Recent projects have included intersection traffic signals, culvert replacement, road improvements and geotextile testing.

TECHNICAL SOCIETY AFFILIATIONS:

American Society of Civil Engineers
American Welding Society
Engineering Society of Detroit (ESD)

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF PROFESSIONAL LICENSING

N034888

PROFESSIONAL ENGINEER
LICENSE

GARY E PUTT

LICENSE NO.
6201038417

EXPIRATION DATE
10/31/2019

AUDIT NO
3280987

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STEVEN PELTO, PE

TITLE:

Senior Geotechnical Engineer

EDUCATION:

University of Detroit-Mercy; MS in Geotechnical/Environmental Engineering, 1998
Lawrence Technological University; BS in Civil Engineering, 1995
Mid-State Technical College; AAS in Civil Engineering Technology, 1984

PROFESSIONAL DEVELOPMENT:

8-Hour Annual HAZWOPER Refresher Training, Annually
DOT Supervisor Awareness Training, 2011
Excavation/Trenching Safety Training, 2008
10-Hour OSHA Construction Safety Training, 2006
40-Hour HAZWOPER Training, 1991
Troxler Electronics, 1985
TWIC Cardholder

LICENSES/REGISTRATIONS:

Licensed Professional Engineer, State of Michigan, #6201050152
Licensed Professional Engineer, State of Nevada, #023602

EXPERIENCE:

Experienced in the evaluation of distress studies for pavements, building foundations and floor slabs, foundation underpinning, bearing capacity analyses, deep foundation analyses, retaining wall analyses and design, settlement analyses and construction dewatering feasibility studies, wetlands and gravel mine reclamations, groundwater communication studies for wetlands and 100 year basement floodplain studies Phase I and Phase II ESA's and Hydrogeological Studies. Extensive geotechnical and materials laboratory experience.

Experienced in the Supervision and Monitoring of Aquifer Pumping Tests for Wellhead Protection Studies, Pile Load Tests, Slope Indicators, Test Pit Investigations, boring layout and basic surveying tasks.

Extensive experience in the supervision, placement and monitoring of engineered fills over difficult soils, shallow and deep foundation inspections, mechanically stabilized earth (MSE) retaining walls.

MUNICIPAL PROJECT EXPERIENCE:

- Detroit Wastewater Treatment Plant - MI
- Algonac Wastewater Treatment Plant - MI
- Studebaker Storm Sewer Feasibility Study - South Bend, IN
- Lemont WRP Project- Lemont, IL
- IDNR Campground and Comfort Station- Salomonie and Missisenewa Reservoirs
- Fir Road Booster Station- Mishawaka, IN

STEVEN PELTO, PE

MUNICIPAL PROJECT EXPERIENCE: Cont.

- City of Warren; 12 Mile Road Water Main Replacement
- City of Warren; 14 Mile Road Water Main Replacement
- M-29 Water Main Crossing (Shoring Design for Bore/Jacking Pits) - New Baltimore, MI
- Water Main Crossing Under Ann Arbor Road (Shoring Design for Bore/Jacking Pits) - Plymouth, MI
- Village of Armada; Powell Road Sanitary and Water Mains (c/o Spalding DeDecker)
- Flint Street Improvements- Novi, Michigan (City of Novi)
- City of Novi; 14 Mile Road and Haggerty Road Intersection Improvements
- City of Novi; Meadowbrook Road Improvements
- City of Rochester Hills; Ludlow Avenue Paving Project and Sanitary and Water Main Replacements (c/o AEW, Inc.)
- City of Novi; 10 Mile Road Corridor Feasibility Study
- WCRC; Zeeb Road Improvements - Lodi Township, MI
- Canal Road Improvements and Water Main Crossing - Harrison Township, MI (c/o HRC, Inc.)
- Proposed Ring Road- New Hudson, Michigan (c/o Civil Engineering Solutions)
- City of Rochester Hills; Tienken Road Expansion
- City of Rochester Hills; Auburn Road Improvements
- Center Road CMAQ Traffic Signal Upgrade – Burton, MI (c/o Rowe Professional Services Company)
- Proposed Pedestrian Crossing - Marysville, MI (c/o Project Control Engineering, Inc.)
- City of Warren; Dawson Drive Pavement Repair and Water Main
- Genesee County Road Commission; Mount Morris Road Rehabilitation- Richfield Twp., MI
- City of Warren; Ryan Road Rehabilitation
- Village of Franklin 2017-2018 Road Rehabilitation Program
- City of Rochester Hills; Rochester Industrial Drive Reconstruction
- Linden Road Rehabilitation Project - Flint Township, Michigan (c/o Kraft Engineering)

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
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BUREAU OF PROFESSIONAL LICENSING

N051428

PROFESSIONAL ENGINEER
LICENSE

STEVEN C PELTO

LICENSE NO.
6201050152

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3287124

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HARRY I. PAPADOPOULOS, PhD

TITLE:

Senior Geotechnical Engineer

EDUCATION:

Post-Doctoral Studies/Civil Engineering
National Science Foundation Fellow
University of Michigan, 1974

Master of Science/Civil Engineering
Wayne State University, 1971

Ph.D./Soil Mechanics
Wayne State University, 1974

Bachelor of Science/Physics
Victoria University, University of Manchester,
1968

EXPERIENCE:

Dr. Papadopoulos specializes in the fields of Geotechnical Engineering, Materials Testing, Quality Control/Assurance, and Environmental Engineering. He has over 35 years' experience in the United States, Europe, the Middle and Far East providing geotechnical engineering, construction materials testing and environmental site assessment investigations and supervision of engineering and technical staff. Responsibilities include development of geotechnical exploration programs; field and advanced laboratory testing of soils and construction materials, preparation of foundation and construction recommendations including pile, caisson, and auger cast pile recommendations, and slope stability analysis. Also experienced in pavement consulting and underground design. Background in commercial, municipal, industrial, and residential projects. Supervises drilling crews performing geotechnical and environmental sampling, piezometer, and ground water monitoring well installation.

PROJECT EXPERIENCE:

Municipal Projects

Macomb County; 31 Mile Road Bridge over Stony Creek
Village of Clarkston; DPW Building Addition
Ray Township; 27 Mile Road Culvert
City of Ann Arbor; sewer rehabilitation/reconstruction
City of Ecorse; Soils investigation and QC during construction of sewerage system and road paving
City of Detroit; Soil investigations and QC during construction for several new playgrounds
City of Dearborn; Evaluations of concrete of an existing parking structure adjacent to Michigan Avenue
City of Detroit; Evaluation of concrete and QC during construction of several underground parking structures

Major Structures

University of Michigan Brighton Diagnostics Center – Ann Arbor, MI
Wayne State University Mike Ilitch School of Business – Detroit, MI
University of Michigan Athletic Sports Performance Center – Ann Arbor, MI
ATC Manufacturing Plant Additions – Jackson, MI

HARRY I. PAPADOPOULOS, PhD

PROJECT EXPERIENCE: Cont.

Major Structures

A & F Wood Products Addition – Genoa Township, MI

New Manufacturing Building – Fowlerville, MI

Mitchell Plastics Manufacturing Building – Sterling Heights, MI

Arvin Sango Research and Development Center – Northfield Township, MI

Motor City Casino Hotel - Detroit, MI

Kennedy Square Parking Structure Renovations and Additions - Detroit, MI

Farmington Hills High School - Farmington Hills, MI

TECHNICAL SOCIETY AFFILIATIONS:

American Society of Civil Engineers (Southeastern Branch), Member

Association of Architects and Civil Engineers – Cyprus, Member

Institution of Civil Engineers – England, Associate Member

Chi Epsilon, Member

IAN MICKLE

TITLE: Senior Driller

EDUCATION:

AS, Geological Engineering Technician, Applied Arts and Technology, 1979

LICENSES/REGISTRATION:

40-Hour Hazardous Waste Training Certification (OSHA)

8-Hour Hazardous Waste Training Refresher, 2018

EXPERIENCE:

Thirty-nine (39) years' experience in operating drilling equipment and supervising drilling crews for geotechnical and environmental projects -- often at environmentally hazardous sites. Projects include roads, bridges, underground utilities, embankments, parking lots, high-rise buildings, low rise commercial/industrial buildings, residential, sewer and water main. Mr. Mickle has extensive experience with traffic control and right of way permitting. Drilling operations experience includes the use of pavement coring equipment, dynamic cone penetrometer (DCP), solid and hollow stem augers; wash borings; vibra corer; Borros Polydrill; rock and concrete coring; shallow and deep hole drilling; mineral exploration; and monitoring and recovery well installation.

PROJECT EXPERIENCE

- City of Novi as-needed geotechnical engineering and construction materials testing contract. TEC was selected in 2014 and has completed at over 30 geotechnical projects to date (including roads, trails/pathways, infrastructure, and traffic signals. Prior to this contract, we also performed numerous road and utility services for Novi. Mr. Mickle is the Senior Driller on the projects for this contract.
- City of Sterling Heights as needed services contract: TEC has had this contract for over 28 years. Consequently, Mr. Mickle has served as crew chief for road, sewer or water main geotechnical and pavement investigation since 1994, on 30+ of these projects.
- City of Troy as-needed services contract: TEC has had this contract for over 30 years. Mr. Mickle has been the crew chief for at least 38 road, sewer or water geotechnical investigations since 1994.
- TEC has provided geotechnical investigations on numerous road projects in the City of Farmington Hills. These projects have been for individual roads as well as for entire annual programs including the 2007/2008, 2006/2007, 2005/2006, major road design and resurfacing projects. Mr. Mickle provided drilling and pavement coring services on all of these projects.
- City of Rochester Hills as-needed contract: TEC is under contract for as needed geotechnical and construction materials testing for 2015 – 2019. Services are primarily for roadway paving, pedestrian paths, and utility construction.

IAN MICKLE

MUNICIPAL PROJECT EXPERIENCE:

- Roundabout at Whittaker and Stoney Creek Roads in Ypsilanti. Tec provided geotechnical investigation consisting of nine borings and four pavement cores. The project required a county permit and extensive traffic control due to the geometry of the intersection.
- TEC provided services to MDOT under an as-needed services geotechnical services contract for the Metro Region. Projects have included interchange improvements, detention ponds, pedestrian paths and culvert replacement. Mr. Mickle has been the lead driller on all of these projects.
- Provided drilling and pavement coring projects for numerous municipalities and civil engineering firms on both local and major streets, for reconstruction, overlays, widening and utility design and construction.

RUBEN E. RAMOS, PE

TITLE:

Vice President & Principal

EDUCATION:

B.S., Civil Engineering
Wayne State University, 1979

LICENSES/REGISTRATION:

Registered Professional Engineer, State of Michigan, 1984

EXPERIENCE:

Thirty-three (33) years' experience in construction QA/QC consulting, project engineering and management for commercial, industrial and governmental projects; project engineering management experience in construction quality control, precast/prestressed structures, structural steel, pavement management systems, forensic engineering, restoration engineering, structure and soils instrumentation, building skin and roofing systems.

PROJECT EXPERIENCE:

Municipal Projects

- ITC Trail – Phase 2 – City of Novi, MI
- Villa Barr Parking Lot/Pathway – City of Novi, MI
- 13 Mile Road Reconstruction – City of Novi, MI
- Pontiac Trail Pathway – City of Novi, MI
- Providence Park Connector Trail – City of Novi, MI
- 8 Mile Road Pathway – City of Novi, MI
- ITC Community Sports Park Trail – City of Novi, MI
- 2017 Pathway – City of Novi, MI
- ITC Pathway – City of Novi, MI
- Beck Road Mid-Block Pedestrian – City of Novi, MI
- 2017 Pathways and ADA Compliance – City of Novi, MI
- Nine Mile Road Resurfacing – City of Novi, MI
- Catherine Industrial Road – City of Novi, MI
- Grand River Avenue Right Turn – City of Novi, MI
- Town Center Drive Rehabilitation – City of Novi, MI
- Meadowbrook Road Reconstruction – City of Novi, MI
- Neighborhood Roads Contract 3-HMA – City of Novi, MI
- Karim Boulevard Reconstruction – City of Novi, MI
- Novi Road Resurfacing – City of Novi, MI
- 2016 Neighborhood Roads Program – City of Novi, MI

RUBEN E. RAMOS, PE Cont.

PROJECT EXPERIENCE: Cont.

Pavement Projects:

- Northbound and Southbound Stephenson Highway – Madison Heights, MI
- I-696-Mound Road Interchange - Centerline and Warren, MI
- I-94 Guardrail - Bellville, MI
- MDOT I-96 Reconstruction - Lansing - MI
- MDOT I 496 Reconstruction - Lansing, MI
- MDOT I-94/I-75 over the Dequindre Yard - Detroit, MI
- Brush Park Infrastructure – Detroit, MI
- Pontiac Silverdome Major Parking Lot Reconstruction - Pontiac, MI
- United Parcel Services Taylor Repaving - Taylor, MI
- Blue Cross/Blue Shield Parking Lot Improvements - Detroit, MI
- Bethany Villa Apartments Pavement Study - Troy, MI
- United Parcel Services Detroit Repaving - Detroit, MI
- Major Roads Improvements - Farmington Hills, MI

Construction Projects: Soils, Concrete, Masonry, Roofing and Structural Steel

- C.S. Mott Children's and Women's Hospital, University of Michigan - Ann Arbor, MI
- New Visteon Headquarters – Van Buren Township, MI
- Toyota Technical Center - Ann Arbor, MI
- Domino Farms World Headquarters Phase I – Ann Arbor, MI
- Shimizu America Corporation, Lenawee Stamping Plant - Tecumseh, MI
- Isuzu Technical Center - Plymouth Township, MI
- Orchestra Hall Expansion – Detroit, MI
- Wayne State University Welcome Center/Parking Garage/Retail Center – Detroit, MI
- Wayne State University Residence Hall – Detroit, MI
- Wayne State University South Residence Hall – Detroit, MI
- New Cass Technical High School - Detroit, MI
- Compuware Headquarters - Detroit, MI
- Compuware Parking Structure - Detroit, MI
- DaimlerChrysler Headquarters – Auburn Hills, MI
- New Comerica Parking Structure – Detroit, MI
- Detroit Symphony Orchestra Building – Detroit, MI
- Millender Center Omni Hotel Complex - Detroit, MI
- Cobo Hall Convention Center - Detroit, MI
- University of Michigan Palmer Drive Development – Ann Arbor, MI
- Ford Motor Company Electro-Galvanizing Plant - Dearborn, MI
- Romulus Engine Plant, General Motors Corporation - Romulus, MI
- St. Joseph Hospital - Mt. Clemens, MI
- Veterans Administration Medical Complex - Detroit, MI
- Internal Revenue Service's Building - Detroit, MI

RUBEN E. RAMOS, PE Cont.

PROJECT EXPERIENCE: Cont.

Roofing Projects:

- Cobo Convention Center – Detroit, MI
- Chippewa Valley Schools - Clinton Twp, MI
- Berkley Schools - Berkley, MI
- Archdiocese of Detroit - Detroit, MI
- Detroit/Windsor Tunnel Authority - Detroit, MI
- Wayne State University - Detroit, MI
- Allstate Insurance
- State Farm Insurance
- University of Michigan - Ann Arbor, MI
- Utica Community Schools – Utica, MI
- First Presbyterian Church – Royal Oak, MI

TECHNICAL SOCIETY AFFILIATIONS:

American Concrete Institute Greater Michigan Chapter (ACI-GMC), Past President
American Counsel of Engineering Companies (ACEC), Board Member
Building Owners and Managers Association (BOMA)
Concrete Improvement Board, Past Board Member
Engineering Society of Detroit (ESD)
Michigan Society of Professional Engineers (MSPE)
National Society of Professional Engineers (NSPE)
Precast/Prestressed Concrete Institute (PCI)
Roofing Consultants Institute (RCI)
Michigan Asphalt Paving Association (MAPA)

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
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N516812

PROFESSIONAL ENGINEER
LICENSE

RUBEN ELLIAS RAMOS

LICENSE NO.
6201030630

EXPIRATION DATE
10/31/2020

AUDIT NO
3374613

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WILLIAM J. WEST, PE

TITLE:

Project Manager, Construction Services

EDUCATION:

B.S.E., Civil and Environmental Engineering, University of Michigan, 1992

M.S., Civil and Environmental Engineering, Wayne State University, 1996

M.S., Administration, Central Michigan University, 1999

LICENSES/REGISTRATION:

Registered Professional Engineer, States of Michigan, Indiana, Illinois, Wisconsin and Kentucky

Certified Traffic Control Supervisor, ATSSA

Certified Flagger Instructor, ATSSA

40 Hr. Site Worker Training, HAZWOPER (29 CFR 1910.120)

Manager and Supervisor Training (29 CFR 1910.120)

Certified Construction Site Storm Water Operator, MDEQ

PROFESSIONAL DEVELOPMENT:

MACP, LACP, and PACP Certificate, 2012

EXPERIENCE:

Twenty-six (26) years' experience in construction QA/QC on earthwork, infrastructure, paving, and remediation projects throughout the Midwest; soils and construction materials field and laboratory testing, slurry trench construction, in-situ and ex-situ soil stabilization, construction inspection, geotechnical engineering and pavement consulting. Extensive experience developing and implementing QC/QA testing programs for civil and environmental engineering projects.

PROJECT EXPERIENCE:

Municipal Projects

- ITC Trail – Phase 2 – City of Novi, MI
- Villa Barr Parking Lot/Pathway – City of Novi, MI
- 13 Mile Road Reconstruction – City of Novi, MI
- Pontiac Trail Pathway – City of Novi, MI
- Providence Park Connector Trail – City of Novi, MI
- Eight Mile Road Pathway – City of Novi, MI
- ITC Community Sports Park Trail – City of Novi, MI
- 2017 Pathway – City of Novi, MI
- ITC Pathway – City of Novi, MI
- Beck Road Mid-Block Pedestrian – City of Novi, MI
- 2017 Pathways and ADA Compliance – City of Novi, MI

WILLIAM J. WEST, PE: Cont.

PROJECT EXPERIENCE: Cont.

Municipal Projects Cont.

- Nine Mile Road Resurfacing – City of Novi, MI
- Catherine Industrial Road – City of Novi, MI
- Grand River Avenue Right Turn – City of Novi, MI
- Town Center Drive Rehabilitation – City of Novi, MI
- Meadowbrook Road Reconstruction – City of Novi, MI
- Neighborhood Roads Contract 3-HMA – City of Novi, MI
- Karim Boulevard Reconstruction – City of Novi, MI
- Novi Road Resurfacing – City of Novi, MI
- 2016 Neighborhood Roads Program – City of Novi, MI
- Featherstone Road Reconstruction- Rochester Hills, MI
- DTW Airfield Pavement Rehabilitation and Modification – Taxiway R – Romulus, MI
- Hamlin Road Reconstruction and Roundabout- Rochester Hills, MI
- Runway 9R/22L Reconstruction – O’Hare Airport - Chicago, IL
- Milford Road Course, GMPG - Milford, MI
- Active Safety Test Area, GMPG - Milford, MI
- East – West and North – South Straightaway Resurfacing, GMPG - Milford, MI
- Vehicle Dynamics Test Area Resurfacing, GMPG - Milford, MI
- I-96 / Kent Lake Road Bridge Reconstruction
- M-39 / I-94 Interchange Improvements
- Franklin Road Reconstruction- Southfield, MI
- Normandy Road and 12 Mile Road Rehabilitation - Royal Oak, Michigan
- North Old Woodward Reconstruction with Bridge Replacement- Birmingham, MI
- Hildebrandt Rd. and Harrison Rd. Reconstruction - Romulus, MI
- 9 Mile Road Rehabilitation - Farmington Hills, MI
- Thirteen Mile Road Rehabilitation- Southfield, Michigan
- Coolidge Road and Nine Mile Road Intersection Reconstruction- Oak Park, MI
- Seaver Farms Infrastructure, Embankment and Roadway Construction - Ypsilanti, MI

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6201042702

EXPIRATION DATE
10/31/2019

AUDIT NO
3239701

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MARK MCGUCKIN

TITLE: Field and Laboratory Supervisor

EDUCATION: High School Diploma

LICENSES/REGISTRATION:

Certified Aggregate Technician (MDOT)
Certified Michigan Level II Advanced Concrete Technician (ACI, MCA)
Certified Michigan Concrete Technician Level I (ACI, MCA)
Michigan QC/QA Bituminous Technician (MDOT)
Certified Concrete Strength Testing Technician (ACI)
Troloxer Certification for Nuclear Density Gauge

EXPERIENCE:

Nineteen (19) years' experience from field representative to his current position of field and laboratory supervisor. Mr. McGuckin has fourteen (14) years' experience in field inspection and testing of construction materials, including shallow foundations; compaction verification of fills and backfills by nuclear density method; quality control inspection of sub-base, base and bituminous pavements; subgrade evaluation, pavement core sampling, quality control inspection and testing of Portland Cement Concrete (PCC); and proper construction and placement of reinforcing steel. Mr. McGuckin's current responsibilities include maintaining all of the equipment calibration, certification and maintenance records and processing for AMRL, CCRL and MDOT round-robin proficiency samples in TEC's AASHTO accredited laboratory.

PROJECT EXPERIENCE

- Served as QA Field and Laboratory Supervisor for the *City of Novi* providing as needed Geotechnical, Engineering and Construction Services on behalf of the City of Novi. Coordinated all field and laboratory testing. Assigned all technicians and assured that all equipment was in good condition and had current calibration papers and that MDOT procedures were followed by TEC QA Staff. The projects included trails, pathways, parking lots, road reconstruction, ADA compliance, mid-block pedestrian pathways as well as resurfacing, rehabilitation of concrete pavement, industrial roads, drives and right turn lanes. TEC performed QA testing on soils, aggregates, HMA and PC concrete. Work was spread out over the 2014 to 2018 construction seasons.
- Served as QA Field and Laboratory Supervisor for the *City of Auburn Hills* providing as needed construction materials QA testing on behalf of the City of Auburn Hills. The project included 1.4 miles (over 7 lane-miles) of concrete pavement repairs and overlay, hot mix asphalt shared-use path, drainage, concrete driveways, sidewalk and ramps, guardrail, and water main on Featherstone Road from Opdyke Road to east to North Squirrel Road in the City of Auburn Hills, Oakland County. Construction plans were later redesigned to include full PC Concrete reconstruction. TEC performed QA testing on soils, aggregates, HMA and PC concrete. Work was spread out over the 2014 and 2015 construction seasons.

MARK MCGUCKIN: (Cont'd)

PROJECT EXPERIENCE: (Cont'd)

- Served as QA Field and Laboratory Supervisor for the *City of Sterling Heights* providing as needed QA Testing of HMA and PC concrete in accordance with HMA LAP requirements. Coordinated all field and laboratory testing. Assigned all technicians and assured that all equipment was in good condition and had current calibration papers and that MDOT procedures were followed by TEC QA Staff. The project included 0.77 mi of cold milling concrete pavement, hot mix asphalt resurfacing, concrete pavement repairs, pavement joint and crack repairs, concrete curb, gutter, sidewalk and ramps, and earthwork on 19 Mile Road from Merrill Road east to Van Dyke Avenue in the City of Sterling Heights, Macomb County.
- Served as QA Field and Laboratory Supervisor for the *City of Farmington* providing as needed field and laboratory QA Testing on PC concrete, HMA materials, trench backfill and pavement structure elements in accordance with MDOT LAP requirements. Coordinated all field and laboratory testing. The project included 0.75 mi of roadway widening, hot mix asphalt cold milling and resurfacing, full-depth pavement repair, concrete curb, gutter, sidewalk and ramp, and underground utility improvements on Drake Road in the City of Farmington.
- Served as Field and Laboratory Supervisor for the *City of Royal Oak* providing as needed QA field and laboratory testing on pavement structure elements in accordance with MDOT LAP requirements including structural fill soils, PC concrete, HMA paving, and verification of lane ties and other load transfer elements. The project included 0.95 mi of hot mix asphalt cold milling and resurfacing, concrete cold milling and pavement repairs, drainage, and concrete curb, gutter, sidewalk and ramps on North Campbell Road from 11 Mile Road to 12 Mile Road in the city of Royal Oak, Oakland County.

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

MARK MCGLUCKIN

of

TESTING ENGINEERS & CONSULTANTS

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

1. Principles and practices of radiation protection.
2. Leak testing procedures.
3. Mathematics and calculations basic to the use and measurement of radioactivity.
4. Biological effects of radiation.
5. Radioactivity measurement standardization and monitoring techniques and instruments.
6. Accident and incident procedures.
7. Procedures for nuclear gauge storage and transportation.
8. General safety precautions.

Gauge Operation

1. Instrument theory
2. Operating procedures
3. Maintenance
4. Field application
5. Gauge calibration

CERTIFICATE #: 086714

GREG FARMEN
Greg Farmer
INSTRUCTOR

5/11/99

DATE

WILLIAM F. TROXLER

PRESIDENT



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Mark D. McGuckin

Has demonstrated through written and performance examinations the ability and understanding necessary for classification as a

MICHIGAN CERTIFIED AGGREGATE TECHNICIAN LEVEL TWO

And is therefore qualified to perform the following tests:

- ◆ Sampling
- ◆ Sample Reduction, Loss by Wash and Sieving
- ◆ Crush Particle Pick
- ◆ Deleterious Particle Pick
- ◆ Flat and Elongated Particles in Coarse Aggregate
- ◆ Fine Aggregate Angularity
- ◆ Fine and Coarse Aggregate Specific Gravity and Absorption

EXPIRES: February 28, 2019

ENDORSEMENTS: ABCDEFG

IDENTIFICATION NUMBER: 100530-0219

Alan C. Robords, Geologist
Chairman, Aggregate Board of
Examiners

Michael Newman, Managing Director
Michigan Mineral Resources
Association

Brenda J. O'Brien, P.E.
Michigan Department of
Transportation

Thomas C. Larabel, Program
Coordinator
Institute for Construction Education and
Training



FERRIS STATE UNIVERSITY
Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Mark D. McGuckin

Has demonstrated through written and performance examinations
the ability and understanding necessary for classification as a

**MICHIGAN CERTIFIED AGGREGATE
TECHNICIAN LEVEL ONE**

And is therefore qualified to perform the following tests:

- ◆ Sampling
- ◆ Sample Reduction, Loss by Wash and Sieving
- ◆ Crush Particle Pick

EXPIRES: January 31, 2019

ENDORSEMENTS: ABC

IDENTIFICATION NUMBER: 100530-0119

Alan C. Robords, Geologist
Chairman, Aggregate Board of
Examiners

Michael Newman, Managing Director
Michigan Mineral Resources
Association

Brenda J. O'Brien, P.E.
Michigan Department of
Transportation

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Mark McGuckin

Has demonstrated though written and performance examinations, the ability to perform Local Agency HMA Sampling,
and is therefore qualified as a

**MICHIGAN CERTIFIED HOT MIX ASPHALT
LOCAL AGENCY SAMPLING**

Certification number: 20170

Expires: May 31, 2019

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

A. John Becsey, P.E.
Managing Director
Michigan Asphalt Paving Association

Brenda J. O'Brien, P.E.
Michigan Department of Transportation



FERRIS STATE UNIVERSITY
Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Mark D. McGuckin

has demonstrated, through a written and practical examination,
the knowledge and ability to perform tests as a

**MICHIGAN CERTIFIED HOT MIX ASPHALT
QC/QA TECHNICIAN**

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

A. John Becsey, P.E.
Managing Director
Michigan Asphalt Paving Association

Brenda J. O'Brien, P.E.
Michigan Department of Transportation

Qualification number: 0146-0418

Expires: April 30, 2018

GARRY ROZYCKI

TITLE:

Senior Engineering Technician

EDUCATION:

B.A. Wayne State University, Detroit, Michigan

LICENSES/REGISTRATION:

Certified Michigan Concrete Technician Level I (ACI, MCA)
Certified MDOT Density Technology, Ferris State University
Certified MDOT HMA Sampling, Ferris State University
Certified Precast Concrete Inspector Level I (PCI #15107)
Troxler Certification for Nuclear Density Gauge

EXPERIENCE:

Thirty-five (35) years' experience in field and laboratory inspection and testing of construction materials, including shallow foundations, compaction verification of structural fills and utility backfills and pavement components; proof roll test observation and recommendations, pavement coring, quality control inspection and testing of PC concrete and HMA pavements; testing and inspection of structural concrete and proper construction and placement of reinforcing steel. Familiar with the following codes and specifications: MDOT, AASHTO, ACI, ASTM.

Also served with Michigan Department of Transportation in the materials and testing laboratory division, ultimately serving as the supervisor of soil density and laboratory testing.

PROJECT EXPERIENCE:

Municipal Projects

- ITC Trail – Phase 2 – City of Novi, MI
 - Villa Barr Parking Lot/Pathway - City of Novi, MI
 - 13 Mile Road Reconstruction – City of Novi, MI
 - Pontiac Trail Pathway - City of Novi, MI
 - 8 Mile Road Pathway - City of Novi, MI
 - ITC Community Sports Park - City of Novi, MI
 - 2017 Pathways and ADA Compliance - City of Novi, MI
 - ITC Pathway - City of Novi, MI
 - Beck Road Mid-Block Pedestrian - City of Novi, MI
 - Nine Mile Road Resurfacing - City of Novi, MI
 - Catherine Industrial Road - City of Novi, MI
 - Grand River Avenue Right Turn - City of Novi, MI
-

GARRY ROZYCKI Cont.

PROJECT EXPERIENCE: Cont.

Municipal Projects Cont.

- Town Center Drive Rehabilitation - City of Novi, MI
- Meadowbrook Road Reconstruction - City of Novi, MI
- Karim Boulevard Reconstruction - City of Novi, MI
- Novi Road Resurfacing - City of Novi, MI
- 2016 Neighborhood Roads Program - City of Novi, MI
- 2018 Local Concrete Street Rehabilitation - City of Novi, MI
- Meadowbrook Road Rehabilitation - City of Novi, MI
- Hamlin Road Reconstruction - City of Rochester Hills, MI
- 2018 Pathway Program - City of Rochester Hills, MI
- Featherstone Road Rehabilitation - City of Auburn Hills, MI
- Hamlin Road Rehabilitation - City of Rochester Hills, MI
- 2018 Concrete Maintenance Program - City of Farmington Hills, MI
- Eddington Blvd. Realignment and Intersection Reconstruction - City of Rochester Hills, MI
- Roselawn, Grant and Thornhill Resurfacing - City of Port Huron, MI

Major Structures

- Cobo Center Renovations, \$300 Million Multi-Year Convention Center Improvements
- Chrysler Sterling Heights Assembly Plant – Multi Year Multiple Phased Auto Plant Expansions
- Chrysler Warren Truck Assembly - Multi Year Multiple Phased Auto Plant Expansions
- MDOT Experience - 30 years' experience with Michigan Department of Transportation. Work included density and concrete testing and inspection on nearly every Interstate Freeway and State Roadway in the Metropolitan Detroit, MI area.

Michigan Concrete Association
Certification Board of Examiners

Hereby certifies that on 5/5/2017

Gary Rozycki

did, by written and performance examinations, complete the requirements for
Concrete Field Testing Technician Level I

This certification expires on 4/15/2020

MCA Certification Board of Examiners

Michigan Department of Transportation
ACI – Greater Michigan Chapter
ACI – West Michigan Chapter
Alpena Community College



MCA Director of Technical Services/Training



Examiner-William Foster



Executive Director-Daniel DeGraaf



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Gary Rozycki

Has demonstrated though written and performance examinations, the ability to perform Local Agency HMA Sampling,
and is therefore qualified as a

**MICHIGAN CERTIFIED HOT MIX ASPHALT
LOCAL AGENCY SAMPLING**

Certification number: 20155

Expires: May 31, 2019

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

A. John Becsey, P.E.
Managing Director
Michigan Asphalt Paving Association

Brenda J. O'Brien, P.E.
Michigan Department of Transportation



Ferris State University



Hereby Certifies That

Gary J. Rozycki

Has demonstrated the ability and understanding of
Density Technology

and is qualified to perform the following tests:

- Density In-Place (Nuclear)
- One Point T-99
- One-Point Michigan Cone
- Michigan Modified
- Speedy Moisture Gauge (Clay and Granular)

Expires: March 31, 2019

Identification No: 10642-0319

AMERICAN CONCRETE INSTITUTE

This is to certify that

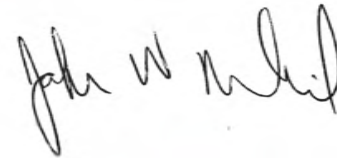
GARY J ROZYCKI

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 05/05/2017 Expires: 05/05/2022

Examiner of Record: Steven M Waalkes



ACI Managing Director of Certification

The Authenticity of this certification can be verified at [www. ACICertification .org/verify](http://www.ACICertification.org/verify)

ACI Certification Results Report
ACI Concrete Field Testing Technician - Grade I

Testing Session Information:

Session: 171573 Exam Date: 05/05/2017 Exam Location: Lansing, MI
 ACI Sponsoring Group: Michigan Concrete Association Phone:(800) 678-9622
 Examiner of Record: Steven M Waalkes

Examinee Information

Gary J Rozycki
 38362 Cottonwood Dr
 Sterling Hts, MI 48310-3330

Certification ID
 00972896

Status Information

Certification Status: **CERTIFIED** ACI Concrete Field Testing Technician - Grade I

Certification Issue Date: 05/05/2017 Thru 05/05/2022

ACI Comments:

Congratulations! You are now Certified. This is an accomplishment you can be very proud of and we will be happy to confirm this credential to anyone upon request. Enclosed is your wallet card and certificate attesting this accomplishment. In addition, a directory of all ACI Certified individuals can be found at www.ACICertification.org.

Overall Results

Performance Overall	PASS
Written Examination	PASS

The Detailed Subtest Results section on next (back) page.

AMERICAN CONCRETE INSTITUTE

This is to certify that


MR GARY J ROZYCKI

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 03/27/2014 Expires: 03/27/2019

Examiner of Record: Kerry E Sutton


ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

TONY PIZZOTTI

TITLE:

Senior Engineering Technician

LICENSES/REGISTRATION:

Certified MCA / ACI Concrete Technician Level I
Certified MDOT Density Technology
Certified MDOT Local Agency HMA Sampling
Troxler Certification for Nuclear Density Gauge

EXPERIENCE:

Twenty (20) years' experience in field inspection and testing of construction materials, including shallow and deep foundations (such as caissons and piles); compaction verification of fills and backfills (by nuclear density method); quality control inspection of subbase, base and bituminous pavements; quality control inspection and testing of Portland Cement Concrete (PCC); and proper construction and placement of reinforcing steel. Familiar with the following codes and specifications: MDOT, ACI, ASTM, AASHTO.

PROJECT EXPERIENCE:

Municipal/MDOT Projects

- ITC Trail – Phase 2 – City of Novi, MI
- Villa Barr Parking Lot/Pathway - City of Novi, MI
- 13 Mile Road Reconstruction – City of Novi, MI
- Pontiac Trail Pathway - City of Novi, MI
- 8 Mile Road Pathway- City of Novi, MI
- ITC Community Sports Park - City of Novi, MI
- 2017 Pathways and ADA Compliance - City of Novi, MI
- ITC Pathway - City of Novi, MI
- Beck Road Mid-Block Pedestrian - City of Novi, MI
- Nine Mile Road Resurfacing - City of Novi, MI
- Catherine Industrial Road - City of Novi, MI
- Grand River Avenue Right Turn - City of Novi, MI
- Town Center Drive Rehabilitation - City of Novi, MI
- Meadowbrook Road Reconstruction - City of Novi, MI
- Karim Boulevard Reconstruction - City of Novi, MI
- Novi Road Resurfacing - City of Novi, MI
- 2016 Neighborhood Roads Program - City of Novi, MI
- CAP- 1606 2016 Sewer and Water Improvements - City of Royal Oak, MI
- Bloomfield Orchards Water Main - City of Auburn Hills, c/o OHM Advisors
- Ryan Road Rehabilitation - City of Warren, MI
- Hamlin Road Rehabilitation, Hamlin Court to Dequindre - City of Rochester Hills, MI
- Hamlin Road Reconstruction - Cities of Auburn Hills and Rochester Hills, MI

TONY PIZZOTTI Cont.

PROJECT EXPERIENCE: Cont.

Municipal/MDOT Projects Cont.

- Wattles Road Water Main and Resurfacing - City of Troy, MI
- Annual Pathways Programs - City of Rochester Hills, MI
- Ludlow Street Reconstruction and Water Main - City of Rochester c/o AEW
- 2nd Street Parking Structure - City of Royal Oak, MI
- Circular Track Reconstruction - General Motors Proving Ground
- City of Detroit; Traffic signal modernization at five locations (MDOT Project #82900-131154)
- City of Auburn Hills; Featherstone Road Improvements QA testing on soils, aggregates, HMA and PC Concrete (MDOT Project #63459-122752A)
- City of Royal Oak; North Campbell Road Rehabilitation QA field and laboratory testing on structural fill soils, PC concrete, HMA Paving, and verification of lane ties (MDOT Project #63459-122764)
- City of Sterling Heights; 15 Mile Road Right Turn Lanes QA field and laboratory testing on structural fill soils, PC concrete, HMA Paving, and verification of lane ties (MDOT Project #50011-116741)
- City of Wyandotte; Oak Street Rehabilitation QA field and laboratory testing on pavement structure elements with MDOT LAP requirements (MDOT Project #82457-121406)
- City of Farmington; Drake Road Rehabilitation QA field and laboratory testing on PC concrete, HMA materials, trench backfill and pavement structure (MDOT Project #63459-118091A)
- City of Sterling Heights; 19 Mile Road Rehabilitation QA testing of HMA and PC concrete in accordance with HMA LAP requirements (MDOT Project #50458-115282)
- I-94 / M-39 Interchange Improvements, Allen Park; QC testing on PCC bridge and pavement elements including molding and field testing flexural strength test elements (MDOT Project #82022-110558)

Major Structures

- Campus Martius - Detroit, MI
- Detroit Marine Terminal – Detroit, MI
- Dequindre Yard - Detroit, MI
- DWSD PC 740 - Detroit, MI
- New Patient Tower, St. Joseph Mercy Oakland Hospital - Pontiac, MI
- Ford – Livonia Transmission Plant Refurbishment – Livonia, MI
- General Motors Proving Ground Safety Laboratory - Milford, MI
- Huron Valley Hospital - Commerce Twp., MI
- Great Lakes Crossing Shopping Center - Auburn Hills, MI
- William Beaumont Hospital; West Hospital Addition - Troy, MI
- Linear Accelerator - Mt. Clemens, MI
- Rouge Steel - Dearborn, MI
- DCTC - Auburn Hills, MI
- Oakland Community College Highland Lakes Campus Site Work - Waterford, MI

CERTIFICATION OF RADIOLOGICAL AND OPERATIONAL TRAINING

This will certify that on June 19, 1997

Mr. Tony Pizzotti

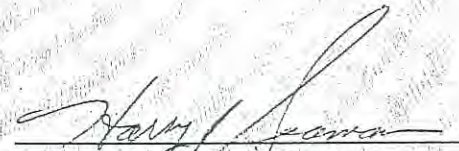
successfully completed the factory training course for the use of Seaman Nuclear density/moisture content meters. Seminar content and the written examination covered: radiological safety, regulatory requirements, theory and operation of nuclear meters, and initial HAZMAT training, encompassing regulations and the correct procedures involved in the transport of portable nuclear density/moisture meters.

This certificate further attests that the above named has received instruction in the procedures necessary for accurate compaction testing in soils and asphaltic concrete.

This Certificate Has Been Issued By
THE SEAMAN NUCLEAR CORPORATION
7315 South First Street
Oak Creek, WI 53154-2095



SCOTT C. SEAMAN
President & R.S.O.



HARRY J. SEAMAN
Vice President & Instructor



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Tony E. Pizzotti

Has demonstrated the ability and understanding of Density Technology,
and is therefore qualified to perform the following tests:

- ◆ Density In-Place (Nuclear)
- ◆ One-Point Michigan Cone
- ◆ Speedy Moisture Gage (Clay and Granular)
- ◆ One Point T-99
- ◆ Michigan Modified T-180

EXPIRES: March 31, 2022

IDENTIFICATION NUMBER: 11346-0322

Richard Endres, P.E.
Supervising Engineer
Michigan Department of Transportation

David M. Gauthier, P.E. Construction
Field Services Division Michigan
Department of Transportation

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

Michigan Concrete Association Certification Board of Examiners

Hereby certifies that on 3/8/2016

Tony Pizzotti

did, by written and performance examinations, complete the requirements for

Concrete Field Testing Technician Level I

This certification expires on 4/15/2019

MCA Certification Board of Examiners

Michigan Department of Transportation
ACI – Greater Michigan Chapter
ACI – West Michigan Chapter
Alpena Community College



MCA Director of Technical Services/Training



Examiner



Executive Director

AMERICAN CONCRETE INSTITUTE

This is to certify that

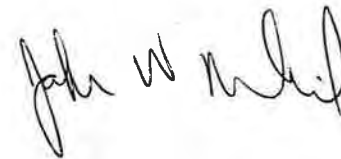
TONY E PIZZOTTI

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 03/10/2016 **Expires:** 03/10/2021

Examiner of Record: Mr Steven M Waalkes



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify



FERRIS STATE UNIVERSITY
Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Tony E. Pizzotti

Has demonstrated through written and performance examinations, the ability to perform Local Agency HMA Sampling,
and is therefore qualified as a

**MICHIGAN CERTIFIED HOT MIX ASPHALT
LOCAL AGENCY SAMPLING**

Certification number: 20576

Expires: May 31, 2021

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

A. John Becsey, P.E.
Managing Director
Michigan Asphalt Paving Association

Curtis Bleech,
Pavement Operations Engineer
Michigan Department of Transportation

BRYAN PROCTOR

TITLE:

Senior Engineering Technician

EDUCATION:

High School Diploma – Flint, MI

LICENSES/REGISTRATION:

Certified Michigan Concrete Technician Level I (ACI/MDOT)
Certified MDOT Density Technology
Trolox Certification for Nuclear Density Gauge

EXPERIENCE:

Over three (3) years' experience in field and laboratory testing of concrete, soils and asphalt. Experience includes testing of construction materials, including shallow and deep foundations (such as caissons and piles); compaction verification of structural fills and backfills, quality control inspection of sub-base, base pavement structure elements; field and laboratory testing of HMA, collection of pavement core samples, quality control inspection and testing of Masonry and Portland Cement Concrete (PCC); and proper construction and placement of reinforcing steel. Familiar with the following codes and specifications: MDOT, AASHTO, ACI, ASTM.

PROJECT EXPERIENCE:

Municipal Projects

- ITC Trail – Phase 2 – City of Novi, MI
- Villa Barr Parking Lot/Pathway - City of Novi, MI
- 13 Mile Road Reconstruction – City of Novi, MI
- Pontiac Trail Pathway - City of Novi, MI
- 8 Mile Road Pathway - City of Novi, MI
- ITC Community Sports Park - City of Novi, MI
- 2017 Pathways and ADA Compliance - City of Novi, MI
- ITC Pathway - City of Novi, MI
- Beck Road Mid-Block Pedestrian - City of Novi, MI
- Nine Mile Road Resurfacing - City of Novi, MI
- Catherine Industrial Road - City of Novi, MI
- Grand River Avenue Right Turn - City of Novi, MI
- Town Center Drive Rehabilitation - City of Novi, MI
- Meadowbrook Road Reconstruction - City of Novi, MI
- Karim Boulevard Reconstruction - City of Novi, MI
- Novi Road Resurfacing - City of Novi, MI
- 2016 Neighborhood Roads Program - City of Novi, MI
- Mruk Avenue Reconstruction - City of Warren, MI

BRYAN PROCTOR Cont.

PROJECT EXPERIENCE: Cont.

Municipal Projects Cont.

- Arsenal Avenue Rehabilitation, Water Main, Sanitary and Drainage Improvements - City of Warren
- Hamlin Road Reconstruction - Cities of Rochester Hills and Auburn Hills, MI
- 2018 Pathway Program - City of Rochester Hills, MI
- 2017 Water Main and Paving Improvements - City of Rochester Hills, MI
- Buchanan Avenue and Pagels Drive Utility and Pavement Improvements - City of Warren
- 2018 Local Road Improvements - City of Rochester Hills, MI
- Wattles Road Water Main and Resurfacing - City of Troy, MI
- 2017-2018 City Park Improvements, Multiple Locations - City of Sterling Heights, MI
- City of Royal Oak - Thirteen Mile Road Reconstruction - Royal Oak, MI
- City of Royal Oak 12 Mile Road Resurfacing Improvements - Royal Oak, MI

Major Projects/Structures

- Ford Dearborn Campus Transformation - Dearborn, MI
- 11 Mile Road Parking Structure, City of Royal Oak, MI
- I-96 Bridge Reconstruction - Milford, MI
- I-94 / M-39 Interchange Reconstruction - Dearborn, MI
- I-696 / I-94 Interchange Reconstruction – Wayne County, MI
- New Adams Road Bridge - Birmingham, MI
- Detroit River Walk - Detroit, MI
- Woodland Hall - Oakland Community College Highland Lakes Campus – Highland Lakes, MI
- SANG Fuel Distribution Facility – Harrison Township, MI
- FCA Sterling Heights Assembly DT Project – Sterling Heights, MI

HAZMAT CERTIFICATION

as required by U.S. DOT and IATA

This certifies that

Bryan Richard Proctor

has been trained and tested in accordance with the U.S. Department of Transportation and International Air Transport Association (IATA) hazardous material requirements for general awareness/familiarization, function-specific, safety, and security awareness training as related to the transportation of nuclear gauges. A description of the training course materials is available from Troxler Electronic Laboratories, Inc. This certificate expires three years from the training date shown below.

September 06, 2016

EMPLOYER CERTIFICATION

I certify that the hazmat employee identified on this certificate has been trained and tested as required by U.S. DOT Hazardous Material Regulations (49 CFR 172 Subpart H).

Signature _____ Title _____



Troxler Electronic Laboratories, Inc.
PO Box 12057-3008 Cornwallis Road - Research Triangle Park, NC 27709
Phone: (919) 549-8661 - Fax (919) 549-0761 - www.troxlerlabs.com

The Leader in Construction Testing Equipment

Course: Hazmat

Tracking Code: K8H596K785KD966_103650

Nuclear Gauge Safety Certification

This certifies that

Bryan Richard Proctor

has successfully completed training on radiation safety and regulatory requirements for the use of portable nuclear gauges on this date.

September 06, 2016

This certificate is not valid until signed by the licensee RSO.

I attest that the person named above, and no other, has completed the online course and tests. I certify that the individual has completed practical skills training for setting up and making measurements, routine maintenance, packaging and transport, storage, and emergency procedures for portable nuclear gauges.

Licensee RSO

William Wes
(print name)

[Signature]
Signature

Date

Troxler Online Training meets the requirements in Chapter 64E, Part XIII, Florida Administrative Code.



Troxler Electronic Laboratories, Inc.
P.O. Box 12057 - 3008 E. Cornwallis Road - Research Triangle Park, NC 27709
Phone: (919) 549-8661 - Fax: (919) 549-0761 - www.troxlerlabs.com

Course: Nuclear Gauge Safety - OL

Tracking Code: K8H596K785KD966_103651

Michigan Department of Transportation
Certificate of Training

This is to certify that


Bryan Proctor

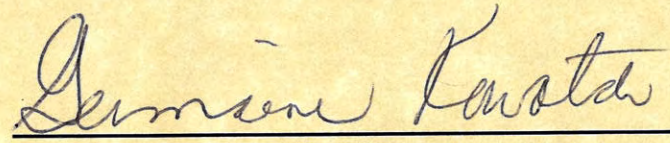
Has successfully completed a course entitled

Hot Mix Asphalt Paving Operations

April 19, 2018

(Expires: April 19, 2023)


Instructor


Construction Field Services Division



Lawrence Technological University
Transportation Materials Laboratory

HEREBY CERTIFIES THAT

Bryan R. Proctor

has demonstrated, through written and performance examination, the ability and understanding of

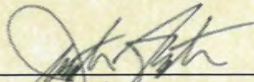
Density Technology

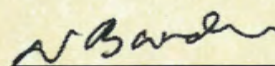
and is therefore qualified to perform the following test:

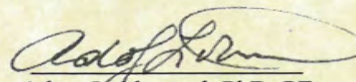
- Density In-Place (Nuclear)
- One Point Michigan Cone
- Speedy Moisture Gauge (Clay and Granular)
- One Point T-99
- Michigan Modified T-180

EXPIRES: May 31, 2022

ID NUMBER: 31934-0522


Justin Foster
Michigan Department of
Transportation


Nishantha Bandara, PhD, PE
LTU Transportation Materials
Laboratory


Adam Lobbestael, PhD, PE
LTU Transportation Materials
Laboratory

Michigan Concrete Association Certification Board of Examiners

Hereby certifies that on 6/8/2017

Bryan Proctor

did, by written and performance examinations, complete the requirements for

Concrete Field Testing Technician Level I

This certification expires on 4/15/2020

MCA Certification Board of Examiners

Michigan Department of Transportation
ACI – Greater Michigan Chapter
ACI – West Michigan Chapter
Alpena Community College



MCA Director of Technical Services/Training



Examiner-William Foster



Executive Director-Daniel DeGraaf

AMERICAN CONCRETE INSTITUTE

This is to certify that

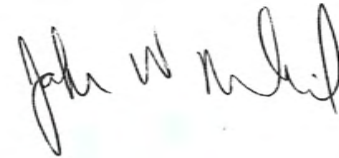
BRYAN R PROCTOR

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 06/08/2017 Expires: 06/08/2022

Examiner of Record: William L Foster



ACI Managing Director of Certification

The Authenticity of this certification can be verified at [www. ACICertification .org/verify](http://www.ACICertification.org/verify)

BRENT GALCZYNSKI

TITLE:

Senior Engineering Technician

EDUCATION:

General Studies/Computer Networking – ITT Technical Institute

LICENSES/REGISTRATION:

MDOT Density Technology – 11360-0417
Troloxer Certification for Nuclear Density Gauge
Qualified Concrete Field Testing Technician Grade I (Michigan Concrete Association)
Qualified Concrete Field Testing Technician Grade I (ACI)

EXPERIENCE:

Responsibilities include eleven (11) years' experience in field and laboratory testing of: soils manufactured aggregates, PC concrete and hot mix asphalt. Extensive experience performing field inspection and testing of construction materials, including shallow and deep foundations such as caissons and piles; compaction verification of fills and backfills; quality control inspection of flexible and rigid pavement elements, trench backfill and other structural fills, HMA and PC concrete pavements and proper construction and placement of reinforcing steel. Familiar with the following code, specifications and test methods: AASHTO, ACI, ASTM, and MDOT.

PROJECT EXPERIENCE:

Municipal Projects

- 5th Avenue Reconstruction - City of Ann Arbor, MI
- State Street CPM Project - City of Ann Arbor, MI
- UFER Water Main Replacement – Ann Arbor, MI
- Ford Boulevard Improvements MDOT 81075-113026A – Ypsilanti, MI
- Golfside Road Improvements MDOT 81475-113025A – Ypsilanti, MI
- Barton Dam Concrete Testing – Ann Arbor, MI
- Traffic Calming Project, Washtenaw County Road Commission - Washtenaw County, MI
- Grove Road Rehabilitation, Washtenaw Count Road Commission - Washtenaw County, MI
- Banyan Court Construction - Ann Arbor, MI

Major Projects/Structures

- University of Michigan 2012 Sidewalk Improvement Program – Ann Arbor, MI
- University of Michigan Parking Lots SC2 & SC32 Reconstruction – Ann Arbor, MI
- University of Michigan Athletics South Competition and Performance Project - Ann Arbor, MI
- University of Michigan Taubman Wing Project - Ann Arbor, MI
- University of Michigan Thompson Street Parking Structure - Ann Arbor, MI

PROJECT EXPERIENCE: Cont.

Major Projects/Structures Cont.

- University of Michigan Eye Center Expansion - Ann Arbor, MI
- University of Michigan C.S. Mott Children's and Woman's Hospital - Ann Arbor, MI
- University of Michigan Football Stadium - Ann Arbor, MI
- Oak Valley Drive Office Building - Ann Arbor, MI
- Toyota PD Facility - York Township, MI
- Cider Mill Trailer Park – Phase IV - Fenton, MI
- Creekside Intermediate School Additions and Renovations - Dexter, MI
- Dexter High School Additions and Renovations - Dexter, MI
- Lansing Community College Charging Stations – Lansing, MI
- Rolling Hills Phase III Water Park Expansion - Ypsilanti, MI
- Lenawee Schools Center For a Sustainable Future – Adrian, MI
- Independence Lake Spray & Play Zone – Whitmore Lake, MI
- Saline Hospital Renovations & Additions – Saline, MI
- Magna International Addition – Howell, MI
- Chelsea Community Hospital Expansion – Chelsea, MI
- Discount Tire – Green Oak Township, MI
- Crystal Gardens Wedding Chapel – Genoa Township, MI
- Second Baptist Church – Ann Arbor, MI
- VA Hospital Linear Accelerator & Site Improvements - Ann Arbor, MI
- Pinckney Schools Building Renovations, Additions & Site Improvements – Pinckney, MI
- Kroger D526 Addition & Renovations – Milford, MI
- Packard Market Place - Ann Arbor, MI
- St. Joseph Mercy Hospital Tower 3B - Ann Arbor, MI
- Hope Clinic - Ypsilanti, MI
- Chelsea Shopping Center - Chelsea, MI
- Friendship Church - Canton, MI

Certificate of Completion

This certifies that

Brent O. Galczynski

has successfully completed the
Nuclear Gauge Safety Training Class
conducted by the training department of

Troxler Electronic Laboratories, Inc.

J. Patrick Schroeder

Patrick Schroeder

Instructor

August 22, 2007

Date

William F. Troxler, Jr.
President

Pass-Certified to operate Nuclear Gauges



Troxler Electronic Laboratories, Inc.
PO Box 12057 * 3008 Cornwallis Rd. * Research Triangle Park, NC 27709
Phone: (919) 549-8881 * Fax: (919) 549-0761 * Web site: www.troxlerlabs.com

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AMERICAN CONCRETE INSTITUTE

This is to certify that

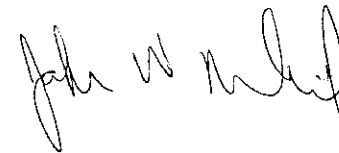
BRENT O GALCZYNSKI

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 04/28/2016 **Expires:** 04/28/2021

Examiner of Record: Kerry E Sutton



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Michigan Concrete Association Certification Board of Examiners

Hereby certifies that on 4/28/2016

Brent Galczynski

did, by written and performance examinations, complete the requirements for

Concrete Field Testing Technician Level I

This certification expires on 4/15/2019

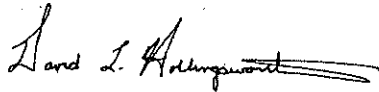
MCA Certification Board of Examiners

Michigan Department of Transportation

ACI – Greater Michigan Chapter

ACI – West Michigan Chapter

Alpena Community College



MCA Director of Technical Services/Training



Examiner



Executive Director



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Brent O. Galczynski

Has demonstrated the ability and understanding of Density Technology,
and is therefore qualified to perform the following tests:

- ◆ Density In-Place (Nuclear)
- ◆ One-Point Michigan Cone
- ◆ One Point T-99
- ◆ Michigan Modified T-180
- ◆ Speedy Moisture Gage (Clay and Granular)

EXPIRES: March 31, 2022

IDENTIFICATION NUMBER: 11360-0322

Richard Endres, P.E.
Supervising Engineer
Michigan Department of Transportation

Michael Newman, Managing Director
Michigan Mineral Resources
Association

Brenda J. O'Brien, P.E.
Michigan Department of
Transportation

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

BRYAN VOLK

TITLE:

Senior Engineering Technician

EDUCATION:

Washtenaw Community College – General Studies

LICENSES/REGISTRATION:

MDOT Density Technology – 30159-0517
Troxler Certification for Nuclear Density Gauge
Qualified Concrete Field Testing Technician Grade I (Michigan Concrete Association)
Qualified Concrete Field Testing Technician Grade I (ACI)

EXPERIENCE:

Responsibilities include thirty-seven (37) years' experience in field and laboratory testing of: soils manufactured aggregates, PC concrete and hot mix asphalt. Extensive experience performing field inspection and testing of construction materials, including shallow and deep foundations such as caissons and piles; compaction verification of fills and backfills; quality control inspection of flexible and rigid pavement elements, trench backfill and other structural fills, HMA and PC concrete pavements and proper construction and placement of reinforcing steel. Familiar with the following code, specifications and test methods: AASHTO, ACI, ASTM, and MDOT.

PROJECT EXPERIENCE:

Municipal Projects

- 5th Avenue Reconstruction – City of Ann Arbor, MI
- Jackson Road Signal and Pedestrian Improvements; Washtenaw County Road Commission
- Oak Valley Road Improvements; Washtenaw County Road Commission
- Redeemer Water Main and Road Rehabilitation – City of Ann Arbor, MI
- Ellsworth Road Resurfacing (Golfside Rd. to Hewitt Rd.); Washtenaw County Road Commission
- Geddes Road at Ridge Road Roundabout Construction; Washtenaw County Road Commission
- Bridge and Culvert Construction Projects (multiple locations); Washtenaw County Road Commission
- Washtenaw County Farm Park Pathway – Ann Arbor, MI
- Dexter-Pinckney Road & Island Lake Road Sidewalk Improvements – Dexter, MI
- UFER Water Main Replacement – Ann Arbor, MI
- Ford Boulevard Improvements MDOT 81075-113026A – Ypsilanti, MI
- Golfside Road Improvements MDOT 81475-113025A – Ypsilanti, MI

BRYAN VOLK: Cont.

PROJECT EXPERIENCE: Cont.

Major Projects/Structures

- University of Michigan Athletics South Competition and Performance Facility – Ann Arbor, MI
- University of Michigan; 2012 Sidewalk Improvement Program – Ann Arbor, MI
- University of Michigan; Parking Lots SC2 & SC32 Reconstruction – Ann Arbor, MI
- University of Michigan; ASCP Complex – Ann Arbor, MI
- LCC Parking Lot W Improvements – Lansing, MI
- Parking Lot and Road Rehabilitation Project (Multiple Locations); Washtenaw Community College – Washtenaw County, MI
- St. Joseph Hospital – Parking and Infrastructure Improvements – Ann Arbor, MI
- Toyota Research Center – York Township, MI
- GM Paint Shop – Flint, MI
- Pipe Supports – Federal Mogul – Plymouth, MI
- Miller Intergenerational Center – Brighton Schools, MI
- Argentine Township Hall Site Improvements, Argentine, MI
- Rolling Hills Phase III Water Park Expansion - Ypsilanti, MI
- Lenawee Schools Center For a Sustainable Future – Adrian, MI
- Independence Lake Spray & Play Zone – Whitmore Lake, MI
- Volunteers of America Elderly Housing – Delta Township, MI
- Magna International Addition – Howell, MI
- Second Baptist Church – Ann Arbor, MI
- Chelsea Community Hospital Expansion – Chelsea, MI
- VA Linear Accelerator & Site Improvements – Ann Arbor, MI
- Pinckney Schools; Building Renovations, Additions & Site Improvements – Pinckney, MI
- General Motors Power Train – Toledo, Ohio
- Northwest Terminal Metro Airport – Romulus, MI
- Marathon Oil Hoop Project – Melvindale, MI
- PPG World Corporate Headquarters – Pittsburg, PA
- One Mellon Bank – Pittsburg, PA



FERRIS STATE UNIVERSITY

Institute for Construction Education and Training



HEREBY CERTIFIES THAT

Bryan L. Volk

Has demonstrated the ability and understanding of Density Technology,
and is therefore qualified to perform the following tests:

- ◆ Density In-Place (Nuclear)
- ◆ One-Point Michigan Cone
- ◆ Speedy Moisture Gage (Clay and Granular)
- ◆ One Point T-99
- ◆ Michigan Modified T-180

EXPIRES: March 31, 2022

IDENTIFICATION NUMBER: 30519-0322

Richard Endres, P.E.
Supervising Engineer
Michigan Department of Transportation

Michael Newman, Managing Director
Michigan Mineral Resources
Association

Brenda J. O'Brien, P.E.
Michigan Department of
Transportation

Thomas C. Larabel, Program Coordinator
Institute for Construction Education and Training
Ferris State University

MICHIGAN CONCRETE ASSOCIATION

CERTIFICATE OF TRAINING

This is to certify that

Bryan Volk

has demonstrated knowledge and ability by successfully completing
the MCA training requirements and is hereby recognized as a

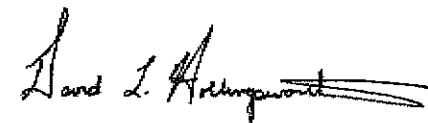
Concrete Construction Inspector

Contributing Organization:
Michigan Department of Transportation

Date: 6/7/2012



Daniel M. DeGraaf, P.E.
Executive Director



David Hollingsworth
Director of Technical Services/Training

AMERICAN CONCRETE INSTITUTE

This is to certify that

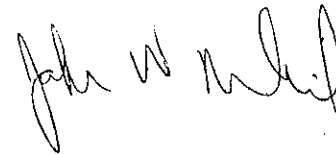
BRYAN L VOLK

*has demonstrated knowledge and ability by
successfully completing the ACI Certification
requirements and is hereby recognized as an*

ACI Concrete Field Testing Technician - Grade I

Certified Date: 03/08/2018 Expires: 03/08/2023

Examiner of Record: Steven M Waalkes



ACI Managing Director of Certification

The Authenticity of this certification can be verified at www.ACICertification.org/verify

Michigan Concrete Association Certification Board of Examiners

Hereby certifies that on 3/8/2018

Bryan Volk

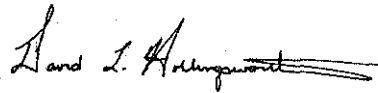
did, by written and performance examinations, complete the requirements for

Concrete Field Testing Technician Level I

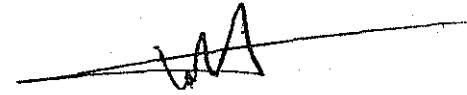
This certification expires on 4/15/2021

MCA Certification Board of Examiners

Michigan Department of Transportation
ACI – Greater Michigan Chapter
ACI – West Michigan Chapter
Alpena Community College



MCA Director of Technical Services/Training



Examiner-William Foster



Executive Director-Daniel DeGraaf

SECTION 4

FIRM QUALIFICATIONS

- Ability to Respond
- Municipal Contracts
- Relevant Project Descriptions
- Municipal Client References

ABILITY TO RESPOND

Proximity

Testing Engineers & Consultants is headquartered in Troy with an additional office / laboratory in Ann Arbor. Each of these offices is located within the required 35 mile radius from Novi City Hall, and can rapidly respond to the needs of City of Novi.

Availability of Staff

TEC has a staff of 78 full-time staff that can be called upon should the need arise. Should the need for additional staff arise, we can assign technicians from our Ann Arbor office, and/or perform testing and analysis at our Ann Arbor Branch Laboratory. TEC’s Project Managers will be responsible for ensuring the availability of key staff identified for this contract in *Section 3*.

Outlined below is a breakdown of our staff by discipline:

Administrative	10
Civil Engineers	6
Construction Inspectors	10
Cad Operators	1
Drillers	3
Engineering Technicians	23
Environmental Scientists	2
Environmental Engineers	1
Facilities Consultants	2
Certified Geologists	1
Certified Industrial Hygienist	1
Industrial Hygienists	5
Pavement Consultants	3
Roof Consultants	2
Geotechnical Engineers	4
Specification Writers	2
Structural Engineers	2
Total Personnel:	78

Familiarity with Officials, Area and Contractors

As evidenced in the enclosed project experience lists and staff resumes, TEC is quite familiar with the area, and local, state and federal guidelines, as well as consultants and contractors utilized by the City of Novi. TEC maintains sub-consultant agreements with many other civil engineering firms or has been retained directly by municipalities to perform geotechnical and construction materials testing in and around Michigan.

We have been providing geotechnical services throughout Michigan and the surrounding states for the past 52 years, and have provided these services to City of Novi on numerous projects during that period. To demonstrate our ability to respond on an as-needed basis, we currently hold, and have had as-needed contracts with numerous MDOT and governmental entities, the Cities of Troy and Sterling Heights for at least the last 30+ years and consequently have provided Geotechnical services on nearly every road and utility project within these cities in the last 30 years or more. In addition, we maintain blanket contracts for similar services with the

ABILITY TO RESPOND Cont.

Road Commission for Oakland County, Washtenaw County Road Commission, and Cities of Rochester Hills, Farmington Hills and Port Huron. TEC also had the MDOT Metro Region contract for As-Needed Geotechnical Services from 2008 – 2010.

We have the ability, credentials and resources to successfully complete City of Novi projects and are eager to assist you.

MUNICIPAL CONTRACTS

TEC fully understands the nature of a municipal contract with respect to responsiveness, efficiency and outcome. TEC has a long list of As-Needed Contracts that we have had or are currently servicing in addition to the City of Novi. We pride ourselves in our ability to respond to the needs of our Clients.

City of Troy

Testing & Inspection Consultant

1979 - Present

As the City's Testing Firm since 1979, TEC has provided storm water consulting, soil borings and geotechnical engineering, construction materials testing and inspection for roadways, as well as testing for municipal buildings such as the new Troy Community Center and new Fire Stations. Work has included testing for road and bridge reconstruction, pavement evaluation, concrete and HMA plant inspection, pre-cast inspection, subdivision work including water main and utility backfill and street paving as well as the Troy airport. TEC has also provided air quality and environmental assessment services.

City of Rochester Hills

Geotechnical and Testing Consultant Contract

2010 - Present

TEC is providing geotechnical and testing and inspection services on a blanket basis to the City of Rochester Hills. The scope of work includes geotechnical engineering and investigations, construction materials testing and inspection, structural steel inspection and testing, and construction inspection. Projects include *boardwalks and pedestrian trails, roadway rehabilitation, and reconstruction, utility and other infrastructure improvements (i.e., water main and booster station, sanitary sewer and storm sewer improvements)* City-owned buildings, and owner-provided testing for private developments.

Washtenaw County Road Commission

Geotechnical and Testing Consultant Contract

2012 – Present

TEC is providing geotechnical and testing and inspection services on a blanket basis to the Washtenaw County Road Commission. The scope of work includes geotechnical engineering and investigations, construction materials testing and inspection on both locally and state funded projects. Projects include *roadway* rehabilitation and reconstruction, utility and other infrastructure improvements.

City of Sterling Heights

Testing & Inspection Consultant

1985 - Present

TEC has provided testing and inspection services to the City for 30 years. The scope of work has included construction materials testing and evaluation, geotechnical engineering and investigations, pavement consulting, precast concrete inspection, structural steel, masonry testing and inspection, water sampling, sediment sampling. Projects have included *utility*

MUNICIPAL CONTRACTS Cont.

improvements, bridges, roads, locally and state funded infrastructure improvements, City-owned buildings and owner-provided testing for private developments.

City of Farmington Hills

Testing/Inspection and Geotechnical 1978-2008, 2013 - Present

TEC maintains a blanket contract with the City of Farmington Hills to provide geotechnical engineering and materials testing services on behalf of the City. Historically, TEC provided the inspection and testing of the granular materials, aggregate base, concrete and bituminous paving along with engineering oversight and corresponding laboratory testing for *roadways, sewers and water mains* in the City as well as pavement design and QA testing. (1978-2008). TEC also provided the materials testing for the *expansion of the Farmington Hills Municipal Center*.

City of Warren

**Geotechnical and Testing Consultant Contract
2014 - Present**

TEC is providing geotechnical and materials testing and inspection services on a blanket basis to the City of Warren. The scope of work includes geotechnical engineering and investigations, construction materials testing and inspection, and environmental consulting on City projects. Projects have included *boardwalks and pedestrian trails, roadway rehabilitation, and reconstruction, water main, sanitary sewer and storm sewer expansion / improvements*, City-owned buildings and other infrastructure improvements.

City of Port Huron

**Geotechnical and Testing Consultant Contract
2011 – Present**

TEC provided geotechnical and testing and inspection services on a blanket basis to the City of Port Huron. The scope of work includes geotechnical engineering and investigations, construction materials testing and inspection and construction inspection. Projects include roadway rehabilitation, and reconstruction, *construction of multiple new parking decks*, utility and other infrastructure improvements, and owner-provided testing for private developments.

City of Royal Oak

**Testing/Inspection and Geotechnical Consultant Contract
2001, 2002, 2004-2006, 2010-2017**

During the reconstruction and rehabilitation of city roadways, and water and sewer projects TEC has provided ongoing soil and bituminous density, concrete inspection and testing, aggregate base sampling and testing, moisture-density relationship, concrete curing and compressive strength and bituminous mix design and verification testing. TEC has provided testing and inspection services to the City for many years. The scope of work has included soils, concrete, bituminous, structural steel, masonry, water sampling, and geotechnical engineering. Projects have included MDOT road resurfacing and reconstruction, utility work, streetscapes, fire station #1 and #2 as well as lead sampling and soil borings.

MUNICIPAL CONTRACTS Cont.

**City of Jackson
Geotechnical and Testing Consultant Contract
2013**

TEC is providing geotechnical and testing and inspection services on a blanket basis to the City of Jackson. The scope of work includes geotechnical engineering and investigations, construction materials testing and inspection, structural steel inspection and testing, and construction inspection. Projects include roadway rehabilitation, and reconstruction, utility and other infrastructure improvements, and owner-provided testing for private developments.

**City of Trenton
Testing/Inspection and Geotechnical 1984-2008**

TEC provided the inspection and testing of the granular materials, aggregate base, concrete and bituminous paving along with engineering oversight and corresponding laboratory testing for roadways, streetscapes and the Jefferson Pump Station as well as geotechnical investigation for sewer work, pump stations and roads. Provided environmental consulting services for pump station decommissioning/demolition and underground storage tank (UST) management.

RELEVANT PROJECT DESCRIPTIONS

Road Rehabilitation / Reconstruction Experience

TEC Project #57601

Geotechnical Investigation

Village of Franklin c/o Hubbell, Roth & Clark
2017-18 Road Rehabilitation Program

The project consisted of various types of proposed repairs to the existing roadways within the limits of the Village of Franklin. The repairs were split into two phases. Phase I was for approximately 11.8 miles of existing roads located west of Franklin Road, with the inclusion of one additional subdivision located east of Franklin Road. Phase II considered the remaining roads east of Franklin Road that equaled approximately 15 miles of roadway.

One hundred ninety-nine (199) pavement cores and test borings were drilled at the locations shown on the Test Boring Location Plan over the course of several weeks from early February to early March, 2017 with truck-mounted auger equipment to depths ranging from 5 to 7.5 feet below top of pavement. Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively.

All data was recorded, interpreted, and considerations and recommendations for soils, ground water and pavement were prepared and presented in a final report to the client.

Traffic Signal Replacement

TEC Project #56062

Geotechnical Investigation

Mast Arms; Dodge Park Intersection: 16 To 17 Mile Rds.
City of Sterling Heights c/o Hubbell, Roth & Clark

TEC was retained to provide a geotechnical investigation for the proposed construction of mast arm poles at four intersections along Dodge Park Road located in Sterling Heights, Michigan. The intersections were located at 16 ½ Mile Road (2 poles), Plumbrook Road (4 poles), 17 Mile Road (4 poles), and Anna Lisa Drive (1 pole).

Seven test borings were drilled on the sites at the locations shown on the Test Boring Location Plans. The locations are accurate to within a short distance of the locations shown on the plans. The test borings were drilled with truck-mounted auger equipment to a depth of 25 feet. Drilling methods and standard penetration tests were performed in accordance with the current ASTM D-1452 and D-1586 procedures, respectively.

Following laboratory testing, all data was recorded, interpreted, and considerations and recommendations for soils, ground water and pavement were prepared and presented in a final report to the client.

RELEVANT PROJECT DESCRIPTIONS

Sidewalk / Pathway Construction

TEC Project #57670

Geotechnical Investigation

Clintonville Road Safety Path

Independence Township

TEC performed a geotechnical investigation for the proposed Clintonville Road Safety Path, located along Clintonville Road, between Spring Meadow Drive and Waldon Road, in Independence Township. The purpose of the investigation was to obtain information necessary to determine basic engineering properties of soils at the site through a series of test borings and laboratory tests performed on the soil samples obtained during the field investigation.

The proposed development consisted of construction of an 8-foot wide safety path adjacent to, but within the existing and proposed right-of-way of Clintonville Road. The total length of the path was approximately 4,500 feet. About 1,800 feet of this was to be a 10-foot wide boardwalk.

Ten test borings were drilled at the approximate locations shown on the Test Boring Location Plan. The boring locations were selected by TEC and staked in the field by TEC. Three borings were drilled in the shoulder of Clintonville Road due to the large number of trees and heavy brush. The remaining borings were drilled east of the ditch along the proposed route of the pathway. The borings were drilled with all-terrain vehicle-mounted (ATV) drilling equipment using a combination of solid-stem augers and hollow stem augers. These borings were drilled to depths ranging from 5 to 23 ½ feet. Two additional borings were added to the scope of work to better define the depth of suitable soils where deep foundations were warranted.

Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively.

Following laboratory testing, all data was recorded, interpreted, and considerations and recommendations for soils, ground water and pavement were prepared and presented in a final report to the client.

Water Main Construction

TEC Project #59226

Geotechnical Investigation

City of Warren

12 Mile Rd Water Main Replacement from Dequindre Rd. to Ryan Rd.

RELEVANT PROJECT DESCRIPTIONS

TEC performed a geotechnical investigation for construction of the 12 Mile Road Water Main Replacement. Four (4) test borings, designated as Boring Nos. 9 through 12 were drilled on the site at the locations shown on the Test Boring Location Plan. Borings Nos. 1 through 8 were drilled for the 14 Mile Road water main project. The test borings were drilled on with truck-mounted auger equipment, each to a depth of 15 feet below the existing grade.

Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively. Following laboratory testing, all data was recorded, interpreted, and considerations and recommendations for soils, ground water and pavement were prepared and presented in a final report to the client.

During the construction phase, TEC provided construction materials quality assurance testing on behalf of the City of Warren. Services included QA testing on utility trench backfill, pavement structure elements, and PC concrete testing.

Sanitary Sewer Rehabilitation

TEC Project #58114

Geotechnical Investigation

Armada Twp. c/o Spalding DeDecker

Proposed Water & Sanitary Main - Powell Rd between 32 & 33 Mile

TEC performed a geotechnical investigation for the proposed water and sanitary sewer main alignment to be located along the east side of Powell Road, between 32 Mile Road and 33 Mile Road in Armada Township, Michigan.

Eleven (11) test borings were drilled on the site at the locations shown on the Test Boring Location Plan. The locations are accurate to within a short distance of the locations shown on the location plan included in the appendix. The test borings were drilled with truck-mounted auger equipment to depths ranging from 20 to 25 feet below the existing ground surface. Drilling methods and standard penetration tests were performed in general accordance with the current ASTM D1452 and D1586 procedures, respectively.

Following laboratory testing, all data was recorded, interpreted, and considerations and recommendations for soils, ground water and pavement were prepared and presented in a final report to the client.

RELEVANT PROJECT DESCRIPTIONS

Road Rehabilitation / Reconstruction, Pathway, Water Main Experience

TEC Projects #53316, 54576

Geotechnical Engineering / Construction Materials Testing

City of Auburn Hills c/o OHM Advisors

Featherstone Road Rehabilitation – N. Opdyke Rd. to N. Squirrel Rd.

TEC was retained to perform a geotechnical investigation, develop rehabilitation design recommendations, and perform construction materials QA testing. This project included 1.4 miles (over 7 lane-miles) of concrete pavement repairs and overlay, hot mix asphalt shared-use path, drainage improvements, commercial drive approaches, sidewalk and ramps, guardrail, and water main on Featherstone Road from Opdyke Road east to North Squirrel Road in the City of Auburn Hills.

During the design phase, TEC performed a geotechnical investigation including recommendations for unbonded PC concrete overlay. TEC was also retained to provide construction materials QA testing on behalf of City of Auburn Hills. Construction plans were later redesigned to include full PC Concrete reconstruction. TEC performed QA testing on soils, aggregates, HMA and PC Concrete. The project extended from the 2014 to the 2015 construction seasons.

Traffic Signal Replacement, Road and Sidewalk Construction

TEC Projects #58955, 59059

Geotechnical Engineering / Construction Materials Testing

Hamlin Road Reconstruction – East of S. Adams Rd. to N. Squirrel Rd.

Cities of Rochester Hills and Auburn Hills

TEC was retained to perform a geotechnical investigation including 30 soil test borings and pavement core samples, develop pavement reconstruction recommendations, and perform construction materials QA testing. This project included 1.1 miles (over 4 lane-miles) of concrete pavement reconstruction, traffic signal/intersection improvements, drainage improvements, subdivision and commercial drive approaches, sidewalk and ramps along Hamlin Road from east of Adams Road to North Squirrel Road in the Cities of Rochester Hills and Auburn Hills.

During the construction phase, TEC provided construction materials QA testing on behalf of both Rochester Hills and Auburn Hills. Duties included QA testing on PC concrete mainline pavement, approaches and ramps, curb & gutter, and traffic signals at the Adams Rd. intersection and materials testing on soils and aggregate.

RELEVANT PROJECT DESCRIPTIONS

Sidewalk / Pathway Construction

TEC Projects #57107, 58867, 59195, 59438

Geotechnical Engineering / Construction Materials Testing

2018 Pathway Program – Technology Drive, Innovation Hills and Butler Road
City of Rochester Hills

TEC performed multiple geotechnical investigations for the design and construction of pathways throughout the 62 acre Innovation Hills Park, including both at-grade and boardwalk segments. The purpose of the investigation was to obtain information necessary to determine basic engineering properties of soils at the site through a series of test borings and laboratory tests performed on the soil samples obtained during the field investigation.

The Innovation Hills portion of the project is ongoing. TEC has provided construction phase services including recommendations for embankment construction and subgrade improvement, including geosynthetically reinforced embankment recommendations, where the pathway traverses formerly wooded areas, and materials testing during pathway construction.

Other phases of the project included new pathway construction along Technology Dr. between W. Auburn Rd. and S. Adams Rd. and along Butler Road between N. Squirrel Rd. and S. Adams Rd. TEC provided recommendations for subgrade improvement where the pathway crossed unsuitable soils and commercial drive approaches, and construction materials testing on pavement structure elements, PC concrete and HMA.

Water Main Construction, Roadway Rehabilitation

TEC Project #57678

Construction Materials Testing

City of Troy

Wattles Road Water Main Replacement and Resurfacing

TEC was retained by the City of Troy to perform construction materials testing during a two-year program that improved City water service along Wattles Road. After utility construction, pavement rehabilitation, resurfacing and localized widening was performed along the Wattles Rd. route.

TEC provided recommendations for subgrade improvement where the widened roadway encountered unsuitable soils, at localized full depth repair locations, and construction materials testing on pavement structure elements, PC concrete and HMA.

RELEVANT PROJECT DESCRIPTIONS

Sanitary Sewer Rehabilitation, Water Main, Traffic Signal and Pavement Improvements

TEC Projects #53337, 55696

Geotechnical Investigation / Construction Materials Testing

City of Rochester Hills

Road Rehabilitation, Sanitary Sewer and Water Main Improvements –
Hamlin Road - Hamlin Court to Dequindre Road

TEC was retained by the City of Rochester Hills to perform a geotechnical investigation, develop roadway rehabilitation design recommendations, and develop design and construction recommendations for traffic signal upgrades, sanitary sewer rehabilitation and water main improvements. This project includes nearly three (3) miles of HMA crushing and shaping, resurfacing, PC concrete paving, commercial drive approaches, water main installation, storm sewer and sanitary sewer installation and traffic signal installation extending from Hamlin Court east to Dequindre Road.

During the construction phase, TEC was retained to perform QA testing and consultation.

Duties included recommendations for subgrade improvement, QA testing on pulverized HMA and aggregate base courses, mainline HMA pavement, sanitary sewer and water main trench backfill, PC concrete approaches and ramps, curb & gutter, and traffic signal improvements at major intersections along the route.

MUNICIPAL CLIENT REFERENCES

Mr. Paul Shumejko, PE, PTOE
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, Michigan 48309
shumejkop@rochesterhills.org
248-841-2489

Mr. Mark Dyer and Mr. Brent Bashaw, PE
City of Sterling Heights
40555 Utica Road
PO Box 8009
Sterling Heights, Michigan 48311-8009
mdyer@sterling-heights.net/ bbashaw@sterling-heights.net
586-446-2440

Mr. Joe Lietaert and Mr. Steve Vandette, PE
City of Troy, Engineering
500 West Big Beaver Road
Troy, MI 48084
jlietaert@ci.troy.mi.us / vandettesj@ci.troy.mi.us
248-524-3383 / 248-524-3387

Mr. James Cubera, PE
City of Farmington Hills
31555 W. Eleven Mile Road
Farmington Hills, MI 48336
jcubera@fhgov.com
248-871-2560

Mr. Robert Barrett
City of Oak Park
13700 Oak Park Boulevard
Oak Park, MI 48327
rbarrett@ci.oak-park.mi.us
248-691-7450

Fees to Provide:

**As-Needed Geotechnical Engineering
Consultant Services for Public Projects**

Submitted to:

City of Novi



“Engineering Client Success”

*TEC Proposal #060-18-0315
Submitted: November 7, 2018*





Testing Engineers & Consultants, Inc.

1343 Rochester Road • PO Box 249 • Troy, Michigan 48099-0249
(248) 588-6200 or (313) T-E-S-T-I-N-G
Fax (248) 588-6232

November 7, 2018

TEC Proposal No. 060-18-0315

City of Novi
Finance Department
45175 Ten Mile Road
Novi, Michigan 48375

**Re: Fees to Provide Geotechnical Engineering/Consultant Services
For Public Projects 2018-2023**

Dear Selection Committee:

Testing Engineers & Consultants, Inc. (TEC), a certified Woman-owned Business Enterprise (WBE), is pleased to present our **Fees** for all aspects of geotechnical engineering and material testing services needed for fiscal years 2018-2023. We have carefully reviewed the formal Request for Qualifications in preparation of the enclosed submittal.

Through our extensive project history with local Municipalities, the State of Michigan, regional organizations such as Washtenaw Country Road Commission and the Road Commission for Oakland County, we are very aware that our fellow residents expect the best infrastructure for the least cost and the fewest number of construction days. Our infrastructure team brings five decades of work history in support of clients just like City of Novi.

A staff of professional engineers, full service laboratories and experienced support staff assist TEC's field personnel as necessary, to ensure a successful project outcome. As our Client, you benefit from the cost and time minimizing aspects of utilizing in house resources, such as TEC's fleet of drill rigs, all- terrain vehicles, and rig- mounted direct push equipment for environmental drilling. Our AASHTO accredited laboratory supports field personnel to provide test results in a prompt and cost-effective manner.

TEC is headquartered in Oakland County and our roots run deep. Our 52 years of professional experience aligns perfectly with the engineering and testing services required for this contract. We look forward to continuing our working relationship into the next two years and beyond.

Respectfully yours,

TESTING ENGINEERS & CONSULTANTS, INC.

A handwritten signature in blue ink, appearing to read "Carey J. Suhan".

Carey J. Suhan, PE
Vice President & Principal

A handwritten signature in blue ink, appearing to read "William West".

William J. West, PE
Manager, Construction Services

Enclosures

Copyright 2018 Testing Engineers & Consultants, Inc. All rights reserved.

All services undertaken are subject to the following policy. Reports are submitted for exclusive use of the clients to whom they are addressed. Their significance is subject to the adequacy and representative character of the samples and the comprehensiveness of the tests, examinations and surveys made. No quotation from reports or use of TEC's name is permitted except as expressly authorized by TEC in writing.

Testing Engineers & Consultants, Inc.

This proposal submitted by:

Company (Legal Registration) Testing Engineers & Consultants, Inc.

Address 1343 Rochester Road

City Troy State Michigan Zip 48083

Telephone 248-588-6200 Fax 248-588-6232

Representative's Name Carey J. Suhan, PE

Representative's Title Vice President & Principal

Authorized Signature _____

E-mail csuhan@tectest.com

Date November 7, 2018

Testing Engineers & Consultants, Inc.

FIRM NAME: _____

ATTACHMENT 'A' GEOTECHNICAL ENGINEERING FEES

COST OF CONSTRUCTION (ESTIMATED) From To		ROAD RECONSTRUCTION		ROAD RECLAMATION		ROAD REHABILITATION		NON-MOTORIZED (SIDEWALKS, PATHWAYS & TRAILS)	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 200,001	\$ 300,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 300,001	\$ 400,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 400,001	\$ 500,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 500,001	\$ 750,000	1	2.0	1	2.0	1	2.0	1	2.0
\$ 750,001	\$ 1,000,000	1	2.0	1	2.0	1	2.0	1	2.0
\$ 1,000,001	\$ 2,000,000	1	1.9	1	1.9	1	1.9	1	1.9
\$ 2,000,001	and greater	0.9	1.9	0.9	1.9	0.9	1.9	0.9	1.9

Note: Construction Phase Services on MDOT LAP projects >\$300,000 = 2.5%

COST OF CONSTRUCTION (ESTIMATED) From To		WATER MAIN CONSTRUCTION		SANITARY/STORM SEWER CONSTRUCTION		UNDERGROUND UTILITY REHABILITATION		TRAFFIC SIGNALS	
		Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)	Design Phase (% Construction)	Construction Phase (% Construction)
\$ -	\$ 200,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 200,001	\$ 300,000	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
\$ 300,001	\$ 400,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 400,001	\$ 500,000	1.25	2.0	1.25	2.0	1.25	2.0	1.25	2.0
\$ 500,001	\$ 750,000	1	2.0	1	2.0	1	2.0	1	2.0
\$ 750,001	\$ 1,000,000	1	2.0	1	2.0	1	2.0	1	2.0
\$ 1,000,001	\$ 2,000,000	1	1.9	1	1.9	1	1.9	1	1.9
\$ 2,000,001	and greater	0.9	1.9	0.9	1.9	0.9	1.9	0.9	1.9

Notes:

1. Design fees are determined by multiplying the construction cost estimate by the % fee shown in the above tables.
2. Construction fees are determined by multiplying the contractor's bid by the % fee shown in the above tables.
3. See the Request for Proposals and Request for Qualifications regarding the specific scope of services included under each fee and for any exclusions (i.e. work performed by City staff as part of the project).
4. All percentages or fees shall be considered 'all-inclusive'.
5. Not all projects will require initial geotechnical design and/or construction material testing.

STATE OF MICHIGAN

COUNTY OF OAKLAND

CITY OF NOVI

**AGREEMENT FOR GEOTECHNICAL ENGINEERING
CONSULTANT SERVICES FOR PUBLIC PROJECTS**

BETWEEN

CITY OF NOVI

AND

TESTING ENGINEERS & CONSULTANTS, INC. (TEC)

This Agreement is effective this 5th day of December, 2018, and is between the **City of Novi**, 45175 Ten Mile Road, Novi, Michigan 48375 (hereafter "**City**") and **Testing Engineers & Consultants, Inc. (TEC)**, 1343 Rochester Road, Troy, Michigan 48099-0249 (hereafter "**Consultant**").

RECITALS:

The City desires to engage the professional services of the Consultant to perform geotechnical engineering services for public projects on behalf of the City.

The Consultant desires to provide such services, as set forth below and in the attached and incorporated Exhibits, under the terms and conditions hereof.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

1. General Scope of Services and Term of Agreement:

- a. For and in consideration of payment by the City as provided in this Agreement, Consultant shall perform the services described herein, including the services described in Exhibit A—*Geotechnical Engineering Consultant Services For Public Projects*, if and when such services are assigned by the City to Consultant, in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances, and in compliance with all terms and conditions of this Agreement.

- b. For geotechnical engineering services for individual projects, if and when assigned to Consultant, including roadway construction and rehabilitation work, sidewalk and pathway construction, water main construction, sanitary sewer/storm sewer construction, underground utility rehabilitation, and traffic signal construction, consultant shall submit an individual work plan and schedule for each project assigned to Consultant by the City based upon the scope of the particular project as described in accordance with Exhibit B— *Geotechnical Engineering Fee Schedule* for that particular type of project. Services shall be assigned to Consultant by approval by the City of a *Work Plan and Schedule*, which shall be prepared for each individual project assigned to Consultant setting forth the specific scope and cost of the particular project. Consultant shall comply with the work description, insurance requirements, and other terms applicable to each individual project as set forth in the *Work Plan and Schedule*.
- c. The term of this Agreement shall be five (5) years from the date set forth above, and will be open for review and negotiation by mutual agreement of Consultant and the City of Novi for any additional terms. However, either party may terminate this Agreement for any reason upon ninety (90) days' written notice to the other party. This Agreement may be terminated by either party upon 7 days' prior written notice to the other party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party. Payments shall be made for work completed up to the termination date.
- d. This Agreement is based on the ordinances, policies, procedures, or requirements in effect on the date of the Agreement. Any additional office or field services required as a direct and apparent result of the change of such ordinances, policies, procedures, or requirements shall be negotiated to the mutual consent of the City and Consultant.
- e. City agrees that the plans, drawings, or other contracted services are primarily for the use of City. All documents prepared by the Consultant, including tracings, drawings, estimates, specifications, field notes, investigations, studies, reports, computer files, field data, notes, etc., in connection with the performance of its duties under this agreement shall become the property of the City upon completion of the services and payment in full of all monies due to the Consultant with respect to the preparation of such document. Reuse of any such materials by City on any extension of any project or any other project without the written authorization of Consultant shall be at City's sole risk. Consultant shall have the right to retain copies of all such materials.
- f. The parties to this Contract intend that the relationship between them created by this Contract is that of service provider and service purchaser. It is expressly agreed, understood and intended that no employee-employer relationship shall exist or be established and that Consultant is an independent contractor who has

been retained to render services to the City to achieve specific results in exchange for specified recompense. As an independent contractor, Consultant expressly agrees that: (a) In the performance of this Contract, the relationship of Consultant to the City shall be that of an independent contractor and not that of an employee or agent of the City, and neither Consultant, nor any agent, employee or permitted subcontractor of Consultant, shall be or may be deemed to be the employee or agent of, or a servant to, the City; (b) Consultant will be solely responsible for payment of salaries, wages, and other compensation for its employees and agents; (c) Neither the Consultant nor any officer, agent, employee or subcontractor of the Consultant shall be eligible for coverage under or eligible to receive the benefits of the City's Workers' compensation, unemployment or health insurance, pension plans or other benefit plans; (d) Consultant is and shall perform under this Contract as an independent contractor, and no liability or responsibility with respect to benefits of any kind, including without limitation, medical/health benefits, Worker's compensation, pension rights, or other rights or liabilities arising out of or related to a contract for hire or employer/employee relationship shall arise or accrue to either party as a result of the performance of this Contract; and (e) Consultant, as an independent contractor, is not authorized to enter into or sign any agreements on behalf of the City.

2. Payment for Services:

- a. Consultant shall invoice City monthly on account of Consultant's services. City shall pay Consultant within thirty (30) calendar days of the time of receipt of invoice from Consultant on account. Subject to sub-paragraph 2(b) below, the City shall pay the undisputed portions of each progress invoice within thirty (30) days of the date of the invoice. If payment is not maintained on a thirty (30) day current basis, Consultant may suspend further performance until payments are current.
- b. City agrees that the periodic billing from Consultant to City are presumed to be correct, conclusive with regard to the services provided, and binding on City unless City, within thirty (30) calendar days from the date of receipt of such billing, notifies Consultant in writing of alleged disagreements with regard to the billing. Errors or discrepancies in a billing recognized after 30 calendar days but not more than 180 calendar days after receipt of invoice from Consultant shall be resolved to the mutual satisfaction of both parties. After 180 calendar days after receipt of invoice from Consultant, the professional services provided by Consultant shall be viewed as acceptable and closed.
- c. All fees and/or costs associated with or due to any governmental or review agencies arising from the services are the sole responsibility of the City.
- d. For individual projects assigned to Consultant in accordance with Section 1(b) above, a more specific procedure for submission and approval of billing statements may be set forth in the *Work Plan and Schedule* for each project. The

City shall confirm the correctness of any progress estimates made for billing purposes, and may use City staff for such purposes. Monthly statements for services shall be accompanied by such properly completed reporting forms and such other evidence of progress as may be required by the City.

- e. In the event of termination for a substantial failure by the Consultant to fulfill its obligations under this agreement through no fault of the City, Consultant shall be paid as compensation in full for services performed to that date an amount calculated in accordance with the *Work Plan and Schedule* for that particular project. Such amount shall be paid by the City upon Consultant's delivering or otherwise making available to the City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been prepared and/or accumulated by Consultant in performing the services up to the date of termination.

3. Indemnification and Liability:

- a. The Consultant agrees to hold harmless and indemnify the City, its officers, agents, employees from and against all claims, demands, suits liability, losses, damages or costs (including reasonable attorney fees and costs) to the extent arising out, of or resulting from the Consultant's tortious or negligent acts, errors, or omissions in performing this Agreement and all Supplemental Agreements.
- b. The City and Consultant acknowledge that the Consultant's Scope of Services does not include any services related to the presence of any hazardous or toxic materials. In the event the Consultant or any other party encounters any hazardous or toxic materials, or should it become known to the Consultant that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of the Consultant's services, the Consultant may, at its option and without liability for consequential damages, suspend performance of its services under this Agreement until such time as the City retains appropriate Consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations.
- c. Consultant shall not be liable for damages resulting from the actions or inactions of any governmental agencies, including, but not limited to, plan processing; provided, however, that this provision shall not relieve Consultant of its obligations under this Agreement, including all Exhibits hereto, with respect to its securing, or assisting the City in securing, various governmental permits and appraisals in a manner consistent with the standard of care set forth in Paragraph 1.a. above.
- d. Except as specifically set forth in the applicable *Work Plan and Schedule*, the City acknowledges that Consultant is not responsible for the performance or work by

third parties, including, but not limited to, construction contractors or their subcontractors.

4. Insurance:

- a. During the term of this Agreement, Consultant shall obtain and maintain in full force, at its own expense, the following insurance coverage in not less than the following amounts:
 - i. Worker's Compensation insurance relative to all Personnel engaged in performing services pursuant to this Agreement, with coverage not less than that required by applicable law,
 - ii. Comprehensive General Liability Public Liability, for occurrences while engaged in performing services pursuant to this Agreement, with coverage not less than the amount of \$1,000,000 per occurrence;
 - iii. Professional Liability (Including Errors and Omissions) Insurance in the amount of \$1,000,000 per claim
 - iv. Automotive Insurance covering all owned, hired, and non-owned vehicles with insurance to comply with the Michigan No-Fault Insurance Law, including Regional Liability Insurance with minimum bodily injury limits of \$1,000,000 each occurrence and minimum property damage of \$1,000,000 per occurrence.
- b. Consultant shall be responsible for all deductibles contained in any insurance required hereunder.
- c. If during the term of this Agreement changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate existing insurance limits, the Consultant will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such reasonable additional insurance coverage cost shall be paid for by the City of Novi, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City. The cost of insurance for individual projects shall be factored into the established fee curves in Exhibit B—*Geotechnical Engineering Fee Schedule* for each particular type of project
- e. All policies shall name the Consultant as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the City.

- f. With the exception of Professional Liability, all insurance policies shall name the City of Novi, its officers, agents, and employees as additional insured. Certificates of Insurance and required endorsements evidencing such coverage shall be submitted to Sue Morianti, Purchasing Manager, City of Novi, 45175 Ten Mile Road, Novi, MI 48375-3024 prior to the commencement of performance under this Agreement and at least fifteen (15) days prior to the expiration dates of expiring policies.
- g. If any service is sublet in connection with this Agreement, the Consultant shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Consultant.
- h. The provisions requiring the Consultant to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Consultant under this Agreement.
- i. Coverage under the general and auto liability policies shall be considered to be the primary coverage rather than any policies and insurance or self-insurance retention owned or maintained by the City of Novi. This coverage shall be primary to the Additional Insureds, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether other available coverage is primary, contributing or excess.
- j. The Policies shall be endorsed to provide the City with thirty (30) days prior written notice of cancellation or nonrenewal.

5. Entire Agreement

- a. Except for the terms of each *Work Plan and Schedule*, which shall be deemed additional terms to this Agreement, this Agreement contains the entire agreement between the City and Consultant relating to services to be provided by Consultant to the City. Any prior agreements, promises, negotiations, and representations not expressly set forth in this Agreement are of no force or effect. Subsequent modifications to this Agreement shall be in writing and signed by both City and Consultant.
- b. With respect to any direct conflict between the terms of this Agreement and any *Work Plan and Schedule* as defined in Section 1(b) above, the terms of the *Work Plan and Schedule* shall control with respect to that individual project.
- c. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.

6. Assignment:

Neither City nor Consultant shall assign this Agreement without the prior written consent of the other.

7. Severability:

Waiver of any term, condition, or covenant, or breach of any term, condition, or covenant, shall not constitute the waiver of any other term, condition, or covenant, or the breach of any other term, condition, or covenant. If any term, condition, or covenant of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions of this Agreement shall be valid and binding on City and Consultant, unless the court's action or holding has the effect of frustrating the purpose of this Agreement.

8. Delays:

It is expected that the Consultant will perform the work in a timely fashion in accordance with the schedule that is agreed upon at the commencement of each project. The Consultant shall provide requested items within ten (10) working days of the request. Deliverables (engineering reports, test results, boring logs, approval letters, rejection letters, inspection reports, etc.) shall be submitted to appropriate City staff no later than ten (10) working days after the work is performed.

Consultant is not responsible for delay caused by activities or factors beyond the Consultant's reasonable control, including but not limited to, delays by reason of strikes, lockouts, except with respect to Consultant's own employees, service slowdowns or stoppages, accidents, acts of God, failure of Client to furnish timely information or approve or disapprove of Consultant's services or product promptly, faulty performance by the City or the City's other contractors or government agencies. When such delays beyond the Consultant's reasonable control occur, City agrees Consultant is not responsible for damages nor shall Consultant be deemed to be in default of this Agreement.

No charges or claims for damages shall be made by the Consultant for delays or hindrances from any cause whatsoever during the progress of any portions of the services specified in this Agreement, except as hereinafter provided.

In case of a substantial delay on the part of the City in providing to the Consultant either the necessary information or approval to proceed with the service resulting through no fault of the Consultant, in delays of such extent as to require the Consultant to perform its services under changed conditions not contemplated by the parties, the City will be responsible for supplemental compensation limited to increased costs incurred as a direct result of such delays. Any claim for supplemental compensation must be in writing and accompanied by substantiating data.

When delays are caused by circumstances or conditions beyond the control of the Consultant as determined by the City, the Consultant shall be granted an extension of time for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the permitting of the Consultant to proceed to complete the services, or any part of them, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights herein set forth.

9. Disclosure:

Consultant affirms that it has not made or agreed to make any valuable gift whether in the form of service, loan, thing, or promise to any person or any of the person's immediate family, having the duty to recommend, the right to vote upon, or any other direct influence on the selection of consultants to provide professional design services to the City within the two years preceding the execution of this Agreement. A campaign contribution, as defined by Michigan law shall not be considered as a valuable gift for the purposes of this Agreement.

10. Nondiscrimination:

The Consultant shall not discriminate against any employee, or applicant for employment because of race, color, sex, age or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78 Stat. 252 and 1976 PA 4563) and will require a similar covenant on the part of the consultant or subcontractor employed in the performance of this Agreement.

11. Approval; No Release:

Approval of the City shall not constitute nor be deemed release of the responsibility and liability of Consultant, its employees, associates, agents and consultants for the accuracy and competency of their designs, drawings, and specifications, or other documents and services; nor shall that approval be deemed to be an assumption of that responsibility by the City for any defect in the designs, drawings and specifications or other documents prepared by Consultant, its employees, subcontractor, agents and consultants.

12. Compliance With Laws:

This Contract and all of the Consultant's Professional Services and practices shall be subject to all applicable state, federal and local laws, rules or regulations, including without limitation, those which apply because the City is a public governmental agency or body. Consultant represents that it is in compliance with all such laws and eligible and qualified to enter into this Agreement.

13. Notices:

Written notices under this Agreement shall be given to the parties at their addresses on page one by personal or registered mail delivery to the attention of the following persons:

City of Novi: **Jeff Herczeg, Director of Public Works and Cortney Hanson, Clerk, with a copy to Thomas R. Schultz, City Attorney**

Consultant: TESTING ENGINEERS & CONSULTANTS, INC.

CITY OF NOVI

By _____
Robert J. Gatt, Mayor

By _____
Cortney Hanson, Clerk

CONSULTANT – Testing Engineers & Consultants, Inc. (TEC)

By _____
CAREY J. SUHAN